

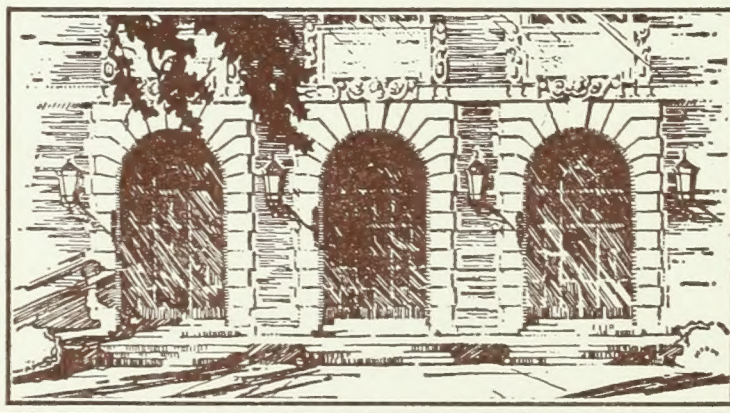
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R e s e a r c h D i g e s t

Volume 10

Number 1

April, 1963

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UNIVERSITY OF ILLINOIS

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Editor's Notes

With this issue, the Research Digest enters its tenth year of publication. In retrospect, these have been years of rapid growth in urban and regional research, both theoretical and applied, a growth which we have attempted to reflect at least in part in our pages. Sufficient response from users of the publication has been received to lead us to believe that the effort has been worthwhile, despite the fact that any such enterprise necessarily sometimes makes its sponsors feel like the sorcerer's apprentice.

In view of the fact that the coverage of the publication has grown and its size has correspondingly increased for the past several issues, the \$2.00 fee introduced some five years ago is no longer sufficient to defray expenses. This matter is currently under review, and a revised rate, yet to be determined, will go into effect beginning with the next issue. (SK)

Founded in 1954 by an informal organization known as the Urban Planning Research Group, the Research Digest is prepared and distributed semi-annually, in April and November, by the Bureau of Community Planning of the University of Illinois. Its objective is to serve as a medium of communication among individuals and groups engaged in urban and regional research. Abstracts are invited covering research projects recently initiated, projects well underway on which significant progress or findings can be reported, and projects recently completed. Brief notes on items of interest to researchers in this field are also desired, as are special articles in keeping with the character of the publication. Subscription is \$2.00 per year. Address all communications to Research Digest, Bureau of Community Planning, University of Illinois, 1202 West California Avenue, Urbana, Illinois.

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1. CIVIC LEADERSHIP STUDY

Main Investigator: Norman F. Washburne.

Status of Research and Publications: Five year study project which has been underway for one year. No publications to date.

Agency: University of Akron, Institute for Civic Education.

Previous Digest Report: None.

Research Problem. To find and identify groups of citizens of Akron who seem to take little interest in community issues, in an effort to determine if such groups have an established leadership which could involve them in public discussions.

Method of Study. First phase consisted of analysis of socio-economic characteristics of 437 political precincts in Akron based on block statistics from 1960 Census supplemented by field work in selected precincts. Present phase consists of development of interview schedule to be used in subsequent field work, covering specific data such as age, sex, ethnicity, education, transiency, and church membership of the respondents and to elicit measures of the direction and intensity of their feelings concerning such issues as local race relations, cultural opportunities, financing city services, fundamentalist church activities, metropolitan government, labor-management relationships, the welfare state, and American foreign policies.

Preliminary Findings. Average property values of owner-occupied homes and average rents of renter-occupied housing units were combined to form a socio-economic index for each precinct. There proved to be a relatively high positive correlation ($r = .63$) between this socio-economic index and the proportion of the total population of the precinct who registered to vote in 1962. If that proportion can be regarded as an index of interest in public affairs, it can be seen that socio-economic status accounts for a significant proportion of the variance in public interest. (NFW)

2. AUTOMATION AND SHIFTING SKILL NEEDS

Main Investigator: Edwin F. Estle.

Status of Research and Publications: Research completed. Article published in the Federal Reserve Bank of Boston's New England Business Review, October, 1962.

Agency: Federal Reserve Bank of Boston.

Previous Digest Report: None.

Research Problem. To assess the affect of automation on the occupational structure of the New England work force.

Hypotheses. Automated production has caused a decline in the need for production workers concomitant with increased demand for non-production workers. New England's growing industries are those which require the highest level of skills; in order to maximize the region's growth, education and training to provide these skills will have to be made more available.

Method of Study. On the basis of material from the Census of Population, the occupational structure of the New England region in 1950 was contrasted with that in 1960.

Major Findings. (1) The proportion of production workers to total employed has declined cyclically, falling to a lower level with each postwar recession, as automated equipment replaced laid-off production workers in the expansion phase of the cycle. (2) Professional, technical, clerical, and sales jobs are becoming a greater proportion of the positions in the region, having increased by 27 per cent between 1950 and 1960. (3) In the past decade skilled craftsmen's positions have increased by seven per cent, the same rate shown by total employment. (4) Semi-skilled positions have fallen off one per cent and unskilled jobs have decreased 17 per cent in the ten year period. (5) To meet these demands for new, higher level skills, more adequate general and vocational educational facilities must be provided. (HCD)

3. VOCATIONAL EDUCATION

Main Investigator: Edwin F. Estle.

Status of Research and Publications: Research completed. Article published in the Federal Reserve Bank of Boston's New England Business Review, November, 1962.

Agency: Federal Reserve Bank of Boston.

Previous Digest Report: None.

Research Problem. To investigate the need for and adequacy of vocational education in New England.

Hypotheses. The disparity between the need for and supply of trained, skilled workers is at the heart of the recent persistent unemployment experience in New England. If the region's demand for

additional skilled workers is to be met, an expanded vocational education system, both to retrain the unemployed for existing openings and to upgrade the skills of the employed, is urgently needed.

Research Method. Projections of occupational needs to 1970 were made on the basis of the 1950 and 1960 Census of Population. Interviews were conducted with vocational education officials in the New England states.

Major Findings. (1) In 1960, 28 per cent of New England's workers were in craft occupations. Although New England has only six per cent of the nation's work force, 22 per cent of the unfilled skilled jobs reported by the U. S. Bureau of Employment Security in June 1962 were located in the region. (2) New England's extensive vocational program has expanded rapidly in the postwar years, enrolling four-fifths more students in 1960 than in 1945. In 1960 expenditures per student amounted to \$122, double the amount spent on the average nationally. (3) The emphasis of New England's programs, reflecting the region's concentration on manufacturing, is in training for trades and industry; in 1960, New England spent \$220 per student in the trades and industrial training programs, almost three times the average national amount. (4) To meet the high costs of specialized training, most of the New England states are establishing regional schools to consolidate facilities and to draw students from several areas. (5) Vocational schools in most New England states are filled to capacity; some have to turn down qualified applicants. State departments of vocational education report that there is virtually 100 per cent placement of the day program graduates in the trades for which they were trained. (6) Currently the region's vocational schools graduate about 10,000 a year from their trades and industry day program; the need for craftsmen is expected to average 16,500 per year to 1970, exceeding the number graduated by about 6,500 a year. To meet this excess demand, the New England states should take steps to add regional facilities and to use idle capacity with additional evening and summer programs. (HCD)

4. RETRAINING THE UNEMPLOYED--THE NEW ENGLAND EXPERIENCE

Main Investigator: Edwin C. Gooding.

Status of Research and Publications: Research completed. Article published in the Federal Reserve Bank of Boston's New England Business Review, August, September, 1962, April, 1963. Statistical appendix also available.

Agency: Federal Reserve Bank of Boston and Massachusetts Division of Employment Security.

Previous Digest Report: None.

Hypothesis. Retraining the unemployed can significantly increase income of persons subject to chronic unemployment, and also decrease the long-run cost of such individuals to government.

Method of Study. (1) Questionnaire survey of retrainees' employment experience before and after retraining was made. (2) A similar questionnaire survey was made of an established control group. (3) Attitude survey was made to determine the extent of interest in retraining among the unemployed. (4) Unemployment compensation records of retrainees and control group records were scanned to compare before and after unemployment compensation costs.

Major Findings. (1) The 35 per cent annual income increases of retrainees was significantly greater than control groups' 10 per cent. (2) Increase in income stemmed primarily from increased steadiness of employment rather than wage increases. (3) Although interest in retraining ran high, previous educational level and old age are significant barriers to retraining. (4) Savings in unemployment compensation might be sufficient to pay entire cost in retraining. (ECG)

5. THE PROPERTY TAX AND LOCAL SPENDING--A NEED FOR BALANCE

Main Investigator: George A. Bishop.

Status of Research and Publications: Research completed. Article published in Federal Reserve Bank of Boston's New England Business Review, December, 1962. Additional statistical materials and notes on sources, etc., are available in a mimeographed supplement.

Agency: Federal Reserve Bank of Boston.

Previous Digest Report: None.

Research Problem. To investigate the relationship between local tax resources, equalized property tax rates and per capita expenditure levels of local governments in New England to determine the influence of variations in local tax resources upon local tax rates and spending and to study to what degree Federal and state aids offset differences in fiscal capacity.

Previous Relevant Research. Such problems in other areas have been examined by Seymour Sacks and William F. Hellmuth in Financing Government in a Metropolitan Area; the Cleveland Experience (Glencoe, Illinois: The Free Press of Glencoe, Inc. 1961); by Robert C. Wood in 1400 Governments; the Political Economy of the New York Metropolitan Region, Cambridge, Massachusetts; Harvard University Press, 1961); by Stanley Scott and Edward L. Feder in a report titled Factors Associated with Variations in Municipal Expenditure Levels; A Statistical Study of California Cities (Berkeley, California; Bureau of Public Administration, February, 1957); and others.

Hypotheses. Tax resources, as measured by equalized property values per capita, are a major factor determining per capita expenditures and equalized property tax rates of localities. The differences in fiscal capacity are strongly related to median family income. The existing Federal and state aids leave a large measure of inequity among local governments in the distribution of fiscal resources and needs.

Method of Study. Equalized property values per capita for 1960 were correlated with equalized property tax rates and per capita expenditures for towns and cities in five New England states (excluding Vermont). Frequency distributions were used relating size of equalized property values per capita to current expenditures, family income, and percentage of intergovernmental revenue to general expenditures.

Major Findings. Wealthy towns generally have lower tax rates and more freedom of choice over how much to spend from local tax sources. Poor towns have the highest effective tax rates. Thus the property tax falls more heavily on low income families and low income towns than on high income families and towns.

State and Federal aids partly offset this difference since not only is more aid given to poorer communities, but also Federal aid is financed in part with taxes that fall more heavily on higher income families. Nevertheless, places with low per capita tax resources often tax themselves at two or three times the rates in more fortunate communities.

In general, size of tax resources--measured by equalized property values per person--is a major influence on both local tax rates and per capita spending. The need for great redistribution of revenues from wealthy to poor towns is clearly evident. Fiscal capacity as measured by equalized or full market value of property per capita should be a more important factor than it now is in formulas for the distribution of state and Federal aid. (MH)

6. FISCAL PROBLEMS OF ALTERNATIVE LAND DEVELOPMENT POLICIES

Main Investigator: Roland S. Artle

Status of Research and Publications: In process.

Agency: University of California, (Berkeley), Bureau of Business and Economic Research, Real Estate Research Program.

Previous Digest Report: None.

Research Problem. Development of an economic model of the San Francisco Metropolitan Area and the use of this model in investigating the impact of public and private investment in construction, transportation and redevelopment upon land values and public finances. (RSA)

7. GEOGRAPHICAL LOCATION OF WHOLESALING

Main Investigator: James E. Vance, Jr.

Status of Research and Publications: In process.

Agency: University of California, (Berkeley), Bureau of Business and Economic Research, Real Estate Research Program

Previous Digest Report: None.

Research Problem. This study has two aspects: (1) To determine the location and physical form of wholesale trade establishments in the San Francisco Bay Area at three periods in time--namely 1908, 1929, and 1962, and (2) to establish the geographical pattern of wholesaling activity in the nation as a whole. These two aspects of the general problem of wholesale trade location are studied in an effort to arrive at a statement of location theory for wholesaling.

The reconstruction of the geographical pattern of wholesale establishments in the Bay Area for 1908 and 1925 is finished, and the inventory of the 1962 pattern was carried out last summer. These have been catalogued and mapped, and analysis of the data is now going on.

Work still to be done concerns first the completion of the national and Bay Area location analysis. With that in hand, the plan is to investigate certain specific problems in wholesaling location such as relocation of the firms, the functional linkages among wholesale firms, conditions of locational stability by type of wholesale establishment, and the physical form and demands of these establishments. (JEV)

8. CONSUMER SHOPPING HABITS IN THE EAST BAY AREA

Main Investigator: Louis P. Bucklin.

Status of Research and Publications: In process. Initial tabulations of data should be available summer, 1963.

Agency: University of California, (Berkeley), Bureau of Business and Economic Research, Real Estate Research Program.

Previous Digest Report: None.

Research Problem. The purpose of this project is to investigate the type of use that consumers make of the various shopping facilities which are available to them. The principal issue to which this research is directed concerns whether consumers who shop in the downtown areas, or planned shopping centers, make use of the opportunity to visit a number of stores to compare prices and qualities, and to purchase a variety of products during the same trip. Issues related to this question concern the type of consumers and their reasons for the shopping habits they have developed. The answer to these and other questions are to be obtained from a completed survey of 500 women shoppers in the East Bay Area. (LPB)

9. THE IMPACT OF MORTGAGE CREDIT ON HOME PURCHASES AND CONSTRUCTION

Main Investigator: Sherman J. Maisel

Status of Research and Publications: In process. An article on the new theory and its statistical test will appear in the June issue of American Economic Review.

Agency: University of California, (Berkeley), Bureau of Business and Economic Research, Real Estate Research Program.

Previous Digest Report: None.

Research Problem. This study has been concerned with bringing together in one place, and improving the economic rationale of mortgage lending operations from the point of view of the mortgage lender and the economy. All existing literature in the field has been reviewed, and an outline has been prepared covering the basic information and analytical tools required for making improvements in this area.

Within this same general area, Professor Maisel has been investigating a method of explaining and forecasting the

level of new housing production. This has involved an investigation of existing theories of why housing starts have fluctuated as they have, evolving a new theory, and then attempting to test the new theory statistically. (SGM)

10. DETERMINANTS OF CENTRAL CITY LAND VALUES

Main Investigators: Paul F. Wendt, Wallace F. Smith.

Status of Research and Publications: One phase of this project completed and published as Research Report No. 18, The Dynamics of Central City Land Values--San Francisco and Oakland, 1950-1960, by Professor Wendt. Two other articles are being prepared by Professor Smith. The first, "Forecasting Neighborhood Change," has been submitted to Land Economics for publication. The second paper presents a mathematical model of the filtering process for publication in the fall of 1963.

Agency: University of California (Berkeley) Bureau of Business and Economic Research, Real Estate Research Program.

Previous Digest Report: None. (PFW)

11. FUTURE PATTERNS OF METROPOLITAN GROWTH AND STRUCTURE IN CALIFORNIA

Main Investigator: Wallace F. Smith.

Status of Research and Publications: In process.

Agency: University of California, (Berkeley), Bureau of Business and Economic Research, Real Estate Research Program.

Previous Digest Report: None.

Research Problem. The analysis of the results of the 1960 Census and earlier studies of metropolitan development provided the basis for an empirical study of the development process for multi-family structures. Data are being assembled on the characteristics and background of developers of multi-family housing, land and construction financing, and the processes through which developed properties are transferred to permanent investors. (WFS)

12. THE SOCIAL GOALS OF CONTEMPORARY BRITISH TOWN PLANNING

Main Investigator: Donald L. Foley.

Status of Research and Publication: Essentially completed.

Published: "Some Notes on Planning for Greater London," Town Planning Review, 32 (April, 1961), 53-65; "Idea and Influence: The Town and Country Planning Association," Journal of the American Institute of Planners, 28 (February, 1962), 10-17. To be published: Controlling London's Growth: Planning the Great Wen, 1940-1960 (University of California Press, 1963 forthcoming). Manuscript of article, but publication uncertain: "Controlling Office Development in London: A Case Study of Central Local Government Relations."

Agency: University of California, (Berkeley), Department of City and Regional Planning.

Previous Digest Report: 6:1-1, 7:2-4.

Research Problem. This study seeks to identify and report on the major social values, particularly those dealing with the character of cities and urban life, which British town planning is seeking to promote.

Major Findings. The TPR article explores implications of the fact that recommendations of the Royal Commission on Local Government in Greater London will likely lead to a reorganization of, and hence a fresh look at, the main ideas and approaches relied upon in planning for metropolitan London. The JAIP article documents the thesis that the garden city movement has had a very strong impact on British town planning and seeks to interpret why this has been the case. The book examines one of the most important social policy experiments ever carried through with respect to a major world metropolis. It focuses on the main ideas in the wartime advisory plans for Greater London and the degree to which these ideas have been effectively implemented in the nearly two decades since. As suggested by its title it particularly deals with the web-like doctrine providing the rationale behind and the planning concepts for controlling metropolitan growth. The soundness of this doctrine in the light of a now available understanding of the development forces at work during subsequent years is appraised. The mechanism by which changes are taken into account and doctrine modified is subjected to scrutiny. (DLF)

13. URBAN RENEWAL PROBLEMS AND PROGRAMS IN CALIFORNIA AND OTHER WESTERN STATES

Main Investigators: Catherine B. Wurster, Donald L. Foley.

Status of Research and Publications: In process. To be published: "Housing Trends and Related Problems in

California," by Donald L. Foley, Wallace F. Smith and Catherine Bauer Wurster, in a report by the Governor's Advisory Commission on Housing Problems (State of California).

Agency: University of California, (Berkeley), Department of City and Regional Planning, under sponsorship of Ford Foundation and the Governor's Advisory Commission on Housing Problems.

Previous Digest Report: 8:2-7.

Research Problem. Within the context of problem as stated in previous abstract, a first completed phase sought to identify main recent housing trends in California's ten metropolitan areas and to discuss the housing and planning problems that must be faced by the State of California.

Method of Study. Relying mainly on 1960 Census data, analysis has focused on the differential availability of housing for low-income and minority groups, and on the differentials between central city and suburban parts of metropolitan areas.

Major Findings. The overwhelming importance of new housing and a dearth of older housing make for special problems in California metropolitan areas, and especially in California metropolitan suburbs, for low-income in-migrants are seriously restricted in the housing they can obtain. Generally, most suburban areas contain middle-income majority whites, with non-white and Spanish surname residents concentrated in central areas or, in some instances, in certain rural fringe shacktown areas. Both low-income and minority status contribute to difficulties in securing adequate housing at fair cost, and a seriously high proportion of households are forced to spend more than one-third of their income on housing. Informed housing policy at the metropolitan level that fully ties in with physical planning policy is needed. The criteria of good housing must be extended to include good community environment and ready accessibility to employment opportunities and community facilities. (DLF)

14. THE DAYTIME POPULATION IN CENTRAL BUSINESS DISTRICTS OF AMERICAN METROPOLITAN AREAS

Main Investigator: Donald L. Foley

Status of Research and Publications: In process.

Agency: University of California, (Berkeley), Department of City and Regional Planning, aided by grant from the Institute of Social Sciences, University of California, Berkeley.

Previous Digest Report: None.

Research Problem. This study undertakes a comparative analysis of the number of persons entering, having destinations in, and accumulating in the CBD's of American metropolitan areas during the typical weekday. The research aims to enhance our understanding of how CBD daytime population (usually expressed as a rate per 1,000 SMSA population) has varied both over time (for selected metropolitan areas) and between metropolitan areas (for any given time). It is hoped to test and to generate further hypotheses using such measures as indicative of the functional importance of CBD's.

Method of Study. The study will mainly rely on data from the numerous traffic studies that have been carried out. It will bring up to date an earlier study published in the early 1950's that examined data for 61 metropolitan areas (Amer. Sociol. Rev., 17 /October, 1962/, 538-543). Methodological problems of putting data into reasonably standardized form for comparative purposes will be explored, supplementing the earlier work. (DLF)

15. HIGH-RISE BUILDING IN THE LOS ANGELES METROPOLIS

Main Investigators: Leland S. Burns and Frank G. Mittelbach

Status of Research and Publications: In process. Publication date as yet not determined.

Agency: University of California, Los Angeles, Graduate School of Business Administration, Real Estate Research Program.

Previous Digest Report: None.

Research Problem. The building of high-rise apartment, office and other structures has received considerable impetus in the Los Angeles SMSA during recent years. The purpose of this study is to explain the reasons for the phenomenon and to determine whether or not high-rise developments will continue to be an important part of building operations in the Los Angeles area. The determinants of supply and demand for high-rise space will be explored.

Hypotheses. Among other factors, the building of high-rise structures is influenced by public regulation, economic return both direct and indirect, architectural considerations and sometimes by the need to develop "monuments." The study will explore the role of the various elements in the Los Angeles area.

Method of Study. An inventory of both new and old high-rise buildings in Los Angeles area will be prepared. The relationship between height and building costs will be determined. The changes in rents and rentable area as height increases will be established empirically. Also, the role of permissive factors such as parking regulations, zoning, and building regulations will be studied. A model incorporating the determinants of supply and demand has been developed, and will be tested empirically. (FGM)

16. PROFILE OF THE LOS ANGELES METROPOLIS: ITS PEOPLE AND ITS HOMES

Main Investigators: Leo Grebler, Fred E. Case, James Gillies, Leland S. Burns and Frank G. Mittelbach.

Status of Research and Publications: The first part of this project, "A Comparative Study of Los Angeles" by Leo Grebler is in press; the second part of the study "The Changing Housing Inventory" by Frank G. Mittelbach will go to press shortly; the other parts of the study are in process.

Agency: University of California, Los Angeles, Graduate School of Business Administration, Real Estate Research Program.

Previous Digest Report: None.

Research Problem. This project draws upon the 1960 Census of Population and Housing for an intensive analysis of the Los Angeles Standard Metropolitan Statistical Area.

Major Findings. Part I of this study points out that the great mobility of the population in Los Angeles reflects continued heavy migration into the area as well as moves by established residents. Los Angeles has the highest ratio of native American population born in another state for any large metropolitan area in the nation. Compared to such areas as New York, Chicago, Philadelphia, Detroit and San Francisco, the Los Angeles SMSA features a population of high educational standards, evidenced by the number of school years completed and college enrollment. Another outstanding feature of Los Angeles is an exceptionally high quality of its housing as measured by minimum Census standards. In some respects, Los Angeles resembles closely other major

metropolitan centers. It has a normal age distribution and normal labor force participation. The industrial structure of Los Angeles has also become quite similar to that of the areas compared. Los Angeles density patterns are increasingly approximating that of the other large communities, and these in turn are evolving in a pattern more closely resembling that of Los Angeles. (FGM)

17. THE RELATIONSHIP BETWEEN LOCAL PROPERTY TAXES AND LAND USE PATTERNS IN LOS ANGELES

Main Investigator: Fred E. Case.

Status of Research and Publications: Research in process.
Publication date as yet not determined.

Agency: University of California, Los Angeles, Graduate School of Business Administration, Real Estate Research Program, in cooperation with the Lincoln Foundation, Claremont College, Claremont, California.

Previous Digest Report: None.

Research Problem. The study of the incidence of property taxes and their relationship to land uses and land use problems.

Hypotheses. Among the questions which will be studied are the following: (1) To what extent do some of the communities represent areas in which properties are "sheltered" from paying for tax-financed local services by using those of adjacent communities? (2) What is the interdependency between tax rates and the retention or growth of industries? (3) Have the taxes created land use patterns which affect the development of the Los Angeles County regional land use plan? (4) How have the land use patterns affected the total tax revenue and the fiscal position of the various communities?

Method of Study. The communities in Los Angeles County are listed in order, according to the tax rate in each. Representative communities are selected from the various tax rate groupings. Among the information being secured for each community are land use patterns, population characteristics, property prices, building permits, real estate market activity, and fiscal position in recent years. The data will be classified and analyzed in various ways to answer the questions posed. (FGM)

18. THE VALUATION OF ACCESSIBILITY

Main Investigator: William C. Pendleton.

Status of Research and Publications: Completed. Paper based on the study presented at January, 1963, Annual Meeting of Highway Research Board.

Agency: University of Chicago, Department of Economics.

Previous Digest Report: 9:1-18.

Research Problem. To infer from sales prices of residential real estate the value buyers place on accessibility to jobs and the central business district. The study was designed to explore the usefulness of real estate selling price data in evaluating the benefits of transportation investments, particularly urban highway improvements.

Major Findings. The sales prices of single family houses vary consistently with accessibility, other characteristics held constant. Of the measures of accessibility used, the gravity-type index of job accessibility yielded the most significant coefficient, but driving time and the logarithm of distance also provided good fits. The driving time rent gradient was completely absorbed by expected savings in auto operating expenses, thus implying a zero or negative valuation of savings in driving time. Among the incidental findings were the following: (1) more sophisticated and expensive measures of accessibility correlate very highly with linear distance to the CBD or its logarithm, (2) the proportion of job trips to the CBD varies directly with accessibility to the CBD, but considerable sectoral variation exists, and (3) with data on relatively few attributes of residential properties, it is possible to explain more than 90 per cent of the variance in sales price. (WCP)

19. APPLIED URBAN RENEWAL SEMINAR: AVONDALE I - CORRYVILLE RESEARCH PROJECT

Main Investigators: Kenneth E. Corey, Robert C. Hoover, Peter H. Nash, Adina C. Ben-Chorin, Donald L. Brummett, Claudia G. Burghardt.

Status of Research and Publications: Preliminary survey and analysis phases of the project completed. A detailed, illustrated document will be forthcoming in June, 1963.

Agency: University of Cincinnati, Institute of Social Studies, and City of Cincinnati, Department of Urban Development.

Research Problem. The primary research problem involves the investigation of the potential development of the Avondale and Corryville areas as neighborhoods compatible with their surrounding environs by means of fundamental data collection, data mapping, and objective analysis of the information. The subsidiary phases of the research problem involve a case study of enlightenment, in terms of probing, in depth into the ills of rehabilitation and conservation procedures as a type of urban renewal treatment. The Avondale-Corryville area and its administration offers an excellent case study for the political-administrative implications of urban renewal and planning decision making.

Hypotheses. Based upon the analysis of the problem, numerous hypotheses have been formulated, some of which have been verified. Hypothetical examples include: Avondale and Corryville areas can be distinguished by architectural or house type districts, historical districts, ethnic districts, and economic level districts. Some examples of hypotheses in the process of being tested include: nearby cultural institutions will have dynamic and positive roles to play in the renewal of the Avondale-Corryville area; rehabilitation and conservation is economically feasible and attainable; code enforcement is a valuable tool in attaining voluntary rehabilitation; and differential or zoned housing codes are possible.

The above are hypotheses which have been formulated, some of which have been tested and verified; others are still in the process of investigation. (KEC)

20. RELOCATION AND MENTAL HEALTH: ADAPTATION UNDER STRESS

Main Investigators: Erich Lindemann, Marc Fried.

Status of Research and Publications: Study begun December, 1957.
Will continue through June 1, 1964.

Agency: Center for Community Studies, an affiliate of Massachusetts General Hospital and Harvard Medical School, under a grant from the National Institute of Mental Health.

Research Problem. The distribution of mental health and illness in a slum area; the relationship between sociocultural and personality factors which foster mental health or mental illness; and the impact of relocation (both the stress of dislocation and the problems of adapting to a new environment) upon mental health and mental illness.

Method of Study. Integrates several methods and types of data: (1) intensive prepost relocation survey interviews, covering

a wide range of experiences and attitude items, with a random sample of 580 females and 406 males completing the post-relocation interview; (2) observational and key informant data (including participant-observation study and ethnographic interviews); (3) intensive studies of selected samples for specific purposes to be done over several years (e.g. comparative study of users and non-users of psychiatric, social, medical and legal agencies); and (4) studies of records and documents (e.g. data from service agencies, census data, historical materials.) (PM)

21. AIR POLLUTION IN THE PENJERDEL REGION

Main Investigators: Francis K. Davis, Jr., and Herman Newstein.

Status of Research and Publications: Scheduled for completion in the spring of 1963.

Agency: Drexel Institute of Technology, under sponsorship of the Pennsylvania-New Jersey-Delaware Metropolitan Project, Inc.

Previous Digest Report: None.

Research Problem. A research design for comprehensive studies of air pollution in the Penjerdel region, including feasible alternative procedures to apply effective control measures. (JWB)

22. LAND USE PLANNING AND CONTROL ALONG THE INTERSTATE HIGHWAY SYSTEM IN GEORGIA

Main Investigators: Howard K. Menhinick and Harry W. Atkinson.

Status of Research and Publications: Completion, March 31, 1963. Publication shortly thereafter.

Agency: Georgia Institute of Technology, Engineering Experiment Station, in cooperation with State Highway Department of Georgia and U. S. Bureau of Public Roads.

Previous Digest Report: 9:1-29. (HKM)

23. RECOMMENDATIONS REGARDING CONTROL OF OUTDOOR ADVERTISING ALONG THE INTERSTATE HIGHWAY SYSTEM IN GEORGIA

Main Investigators: W. Carl Biven and Andrew J. Cooper III.

Status of Research and Publications: Published December, 1962.

Agency: Georgia Institute of Technology, Engineering Experiment Station, in cooperation with State Highway Department of Georgia and U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. To examine the feasibility of the adoption and implementation of the National Standards along the Interstate Highway System within the state of Georgia. (HKM)

24. THE MOVEMENT OF MANUFACTURING WITHIN THE CHICAGO METROPOLITAN AREA, 1955-1962

Main Investigator: Robert L. Koepke.

Status of Research and Publications: In process. Doctoral dissertation.

Agency: University of Illinois, Department of Geography.

Previous Digest Report: None.

Research Problem. During the period 1955-1962, there were 934 manufacturing developments (a new industry, or manufacturing expansion or a movement of a manufacturing plant) in the Chicago Metropolitan Area. The movement of manufacturing plants accounted for the largest part of this total (412 plants moved, or 44 per cent of the total manufacturing developments). The concern of this study is to attempt to explain why these plants moved where they did within this metropolitan area.

Previous Relevant Research. There are several studies concerned with some aspect of the movement of industry within the Chicago Metropolitan Area upon which this study plans to build. None of these, however, have been concerned primarily with understanding why the plants have moved where they have within the whole Chicago Metropolitan Area. Reinemann in a 1955 Ph.D. thesis at Northwestern University was in part interested in the relocation of manufacturing within the Chicago Metropolitan Area. In 1961, the City of Chicago Department of City Planning published a study concerned with Manufacturing in the Chicago Metropolitan Area, especially the city of Chicago and included material on movement. Two unpublished works are Bleile's study of the suburbanization of industry, Ph.D. thesis, Northwestern University, and the updating by the City of Chicago Department of City Planning of its 1961 publication.

Method of Study. This project proposes to answer the question of why by looking at what factors the executives of the plants that moved considered in making the decision, which of these they considered most significant, and why they considered these most significant. This information will be obtained by studying historically, by the use of intensive interviews, the decision of the executives in charge of each plant with fifty or more employees to relocate within the Chicago Metropolitan Area. (RLK)

25. POLITICS OF PLANNING IN SMALL CITIES

Main Investigator: Charles Edwin Patterson, Jr.

Status of Research and Publications: Doctoral dissertation, completed.
A newsletter summarizing findings is to be issued by
Bureau of Community Planning, University of Illinois in near
future.

Agency: University of Illinois, Department of Political Science.

Previous Digest Report: 9:1-29.

Research Problem. The role of city planning in the context of local politics has received little attention. There have been a limited number of case studies of city planning as a political process, but these studies have focused on large cities. Apparently no studies have been made of planning politics in smaller cities, i.e. cities with less than fifty thousand people. In this project interest is therefore focused on city planning politics in four small cities in Illinois in an attempt to identify the partisans of planning issues on a series of related governmental decisions.

Method of Study. In order to understand the group struggle in the cities studied, some background material on the social, economic, and political conditions in each city is included. Since the legal framework within which planning decisions are made is uniform throughout the State of Illinois, it is treated in a separate chapter.

Among the principal questions considered in this study are the following: What identifiable groups are primarily interested in city planning decisions? Do these groups vary in character from city to city? What techniques do they generally rely upon in order to achieve their goals? Have they made city planning an election issue? To what extent have public officials provided leadership in planning policy formation? What has been the result of the infusion of federal grants-in-aid into local planning activity with

respect to the initiation of planning projects? And to what extent have plans been followed and enforced by local authorities or modified through amendments and variations? While the case studies presented are not expected to provide definitive answers to their questions, it is hoped that they will contribute to a better understanding of the planning process.

Major Findings. Each of the cities studied is characterized by a lack of partisan local politics and the absence of city planning as a major electoral issue. Most of the activity relative to planning is limited to a very small number of individuals, with leadership generally coming from outside the local government. The chambers of commerce and a few persons with a cosmopolitan orientation are found to be the principal supporters of city planning efforts. Opposition comes principally from people with a strong local orientation, i.e. people who do not concern themselves much with developments outside the local community and generally are unaware of new ideas or the need to change.

The availability of federal grants-in-aid has encouraged some communities, which might not have done so otherwise, to develop a city plan. Also the standards imposed by the federal government has insured the production of technically competent planning surveys. But plans have been frequently modified as a result of political considerations and more frequently criticized for being too rigid or for having failed to allow for peculiarities in the local situation. Planning is not viewed as a technical function of local government, but as a political instrument for promoting one set of values in preference to others. (CEP, Jr.)

26. URBAN MASS TRANSPORTATION WITH SPECIAL EMPHASIS ON DOWNSTATE ILLINOIS CITIES: A STUDY IN THE FORMATION OF PUBLIC POLICY.

Main Investigator: Robert D. Heidorn.

Status of Research and Publications: In process. Doctoral dissertation in Political Science.

Agency: University of Illinois, Department of Political Science.

Previous Digest Report: None.

Research Problem. The research problem involves the fact that if private enterprise finds that it is no longer able to provide mass transportation facilities in cities at a profit, and such service is discontinued, there will be unfortunate consequences which it may be a responsibility of government to avoid. The present study proposes to study decision making

relative to mass transportation for cities by government--national, state, and local. The decisions actually made will be noted but it is the decision making process with which the study is primarily concerned.

While consideration will be given to policy making at all three levels of government, emphasis will be placed upon cities. Who has been in the past or is at the present time taking the leadership in forming public policy? What have they favored and what methods or means have they used? An approach suggested by Mr. Peter H. Rossi will be relied upon to find answers to these questions. This approach uses decisions as its reference point. The three Illinois cities selected for intensive study of the results of the decision making process in the area of mass transportation are Bloomington, Champaign, and Springfield. All three of these have given some measure of attention to the problem. A study of policy formation on this critical issue should help us to understand the part private individuals and groups play in influencing action and the making of decisions by the formal officers of local government. (RDH)

27. FACTORS INFLUENCING INTERREGIONAL MORTGAGE LENDING BY FINANCIAL INTERMEDIARIES

Main Investigator: Halbert C. Smith.

Status of Research and Publications: Doctoral dissertation completed. Publication plans not reported.

Agency: University of Illinois, Graduate School of Business Administration, under sponsorship of Mortgage Bankers Association of America.

Previous Digest Report: None.

Research Problem. The ability of regions to develop economically through the creation of real estate resources is affected by differentials among regions in the availability of funds for mortgage investment. Because interregional mortgage lenders must make implicit or explicit decisions concerning the regional placement of mortgage funds, the geographic distribution of mortgage funds is subject to the influence of economic, social, and legal characteristics that vary among geographic areas. Identification of these factors affecting the placement of funds by interregional mortgage lenders is the principal objective of this study.

Previous Relevant Research. Although there has been no previous scientific investigation of this specific problem, there has been recognition of the problem by some writers, particularly Saul B. Klamon, The Postwar Residential Mortgage Market (Princeton: National Bureau of Economic Research, 1961) and Oliver Jones and Leo Grebler, The Secondary Mortgage Market--Its Purpose, Performance, and Potential (Los Angeles: University of California, 1961).

Hypotheses. The dependent variable of the study is the mortgage investment held by the principal interregional mortgage lenders--life insurance companies and mutual savings banks--located outside the boundaries of each state. The independent variables of the study are the economic, social, and legal characteristics of geographic areas embodied in the following hypotheses: (1) Economic characteristics that vary among geographic areas (such as mortgage yields, personal income, unemployment, assets and in-state mortgage investment of financial intermediaries, and employment sources) influence the relative level of mortgage investment held by out-of-state interregional mortgage lenders. (2) Social characteristics that vary among geographic areas (Such as urban population, non-white population, population in various age groups, and population growth) influence the relative level of mortgage investment held by out-of-state interregional mortgage lenders. (3) Legal characteristics that vary among states (such as the statutory redemption period, debtor's rights during statutory redemption, ease of foreign corporations to qualify for making mortgage loans, maximum loan to value ratio permitted on conventional mortgages by life insurance companies, maximum interest rate permitted on a mortgage loan, and the number of state laws unfavorable from the viewpoint of mortgage lenders) influence the relative level of mortgage investment held by out-of-state interregional mortgage lenders. Because mortgage yields were included as an independent variable, it was necessary first to test the hypothesis that differentials in mortgage yields exist among regions of the United States.

Method of Study. Heretofore no statistical evidence had been offered as to the existence or non-existence of regional mortgage yield differentials. The Federal Housing Administration furnished on a confidential basis secondary market prices for comparable mortgages insured by the FHA in each insuring office district. These districts were combined into eight regions, and the data were subjected to a two-classification analysis of variance. This analysis indicated that significant differences in mean mortgage yields exist among the eight regions and among annual time periods.

In addition to regional mortgage yields, the other economic, social, and legal variables were tested in several econometric

models for functional relationships with the dependent variable. The economic and social variables were reduced to a per capita basis to provide comparability. The beta coefficients for the variables in each model and the addition of each variable to the equation were tested for significance at the five per cent probability level of error.

Major Findings. The relationships among variables established in the regression models suggested the following conclusions: (1) although states in regions exhibiting significantly higher mortgage yields obtained greater amounts of out-of-state mortgage investment than states in regions exhibiting lower yields, a disequilibrium between supply and demand among regions continues to exist, as evidenced by the yield differentials; (2) economic characteristics of states, as measured principally by per capita personal income and average weekly unemployment, are the most important determinants of the relative levels of mortgage credit supplied by out-of-state financial intermediaries; (3) the ability and willingness of institutions within a state to supply mortgage demand, as evidenced by per capita assets and in-state mortgage investment of financial intermediaries, determine in part the amount supplied by out-of-state sources; and (4) out-of-state mortgage investment is related to the number of state laws unfavorable to mortgage lending. However, individual state laws when classified into two categories, favorable and unfavorable, are not significantly related to per capita amounts of out-of-state mortgage investment. (HCS)

28. COMMUNITY POWER AND DECISION MAKING IN THREE ILLINOIS CITIES

Main Investigators: Herbert V. Gamberg and Nason E. Hall, Jr.

Status of Research and Publications: In process. To be completed by September, 1963.

Agency: University of Illinois, Office of Community Development.

Previous Digest Report: None.

Research Problem. The object of research is the comparative analysis of the structure of power and decision making in three medium-sized metropolitan areas. Special attention is devoted to the interrelationships between social structure and the structure of decision making, and to the implications for the roles of professionals of different decision making structures.

Hypotheses. It is hypothesized that the process by which decisions affecting significant proportions of the metropolitan

population are made is partly a function of the modal type of economic organization (specifically size and type of ownership), and the degree of ethnic identification of sub-group populations. The decision making roles played by economic dominants in a community characterized by large scale bureaucratically-organized enterprises tend to be facilitative rather than innovative, passive rather than active, and fluid rather than stable. The roles of economic dominants in communities having a large number of small, home-owned enterprises tend to be innovative, active, and stable. In the first type, major decisions tend to arise and be resolved in a pluralistic manner; in the latter case, decisions tend to be made by a relatively small number of economic and social elites.

The presence of ethnic sub-groups may modify the relationships hypothesized above as a result of cleavages within the economic elite group.

Method of Study. In each city, interviews were conducted with reputed influentials and with persons identified as active in the resolution of three specific community decisions (political actors). Information was obtained from reputational elites as to their roles in each specific decision and in the general decision making structure, their communication with political actors, and the amount of influence exerted. Political actors were asked about communication with reputational elites, their degree of "independence," and the particular decision making role played. Interview data is supplemented by participant observation, voting, and historical data. (NEH)

29. DOWN-TOWN CHANGE IN MIDDLE-SIZED CITIES

Main Investigator: Everett G. Smith, Jr.

Status of Research and Publications: In process. To be completed by September, 1963.

Agency: University of Illinois, Office of Community Development

Previous Digest Report: None.

Research Problem. This study compares and contrasts recent changes in activities located in the downtowns of three middle-sized Illinois cities, Peoria, Rockford, and Springfield, with 181,000, 172,000, and 111,000 persons, respectively, in the urbanized area in 1960. Though each city has special political and economic qualities which tend to alter the rate of downtown

change, the direction of change in each place indicates clearly a diminishing role for downtown as the major community center for retail transactions, service functions, and other commercial activities.

Downtown change takes the form of direct and indirect threats to a variety of individuals and groups. Merchants fret over losing business to outlying shopping centers; local governmental officials witness an erosion of an important segment of the property tax base and lament over less revenue from sales taxes; investors in downtown properties and businesses contemplate declining returns; and citizens watch their city center being altered and seem unable to agree on whether downtown is ill, what the nature of the illness is, and what proper treatment should be.

Hypotheses. (1) Adjustments and modifications in downtown activities are connected directly to the relative age of downtown and an increasing dependence upon automobiles. (2) Investigation of programs to manage and direct change in downtown in accordance with some overall plan suggests that downtown interests strive to preserve the status quo. Unlike the expanding urban fringe surrounding central cities, where public and private interests must cope with problems associated with rapid and uncontrolled growth, downtowns in middle-sized metropolitan areas today resemble those numerous but much smaller places in the country experiencing no growth or only slow growth. A sense of urgency and anxiety permeates downtown interests, but it takes on a special flavor, for it is almost always expressed in terms of how downtown holds on to what it has. In this situation, it is proposed, the general attitude among those with downtown interests reaffirms the preservation of existing relationships instead of stimulating the search for creative adaptations to change.

Major Findings. Analysis of downtown change, based upon data from Polk City Directories, several years of building permit material, selected retail sales and employment information, maps of ownership and assessments, and interviews with downtown merchants as well as with residents in a variety of neighborhoods, emphasizes a general similarity in recent changes downtown within middle-sized metropolitan areas. These data identify retailing problems resulting from diverse and small ownership parcels, broken commercial frontages, traffic congestion, and stationary or declining sales. They illustrate the physical deterioration of downtown structures through absentee ownerships and increasing vacant locations, particularly above ground floors. They show downtowns in middle-sized cities to be declining in importance as the urban focus for retail, service, entertainment, and cultural activities.

Judging from recent experience in Illinois cities, organized responses to downtown change often include groupings of downtown interests attempting to restore, preserve, or, if possible, improve business conditions. These group efforts concentrate largely on the retail function of the center city core and, "to bring the people back downtown," stress such "all-rewarding" issues as treasure hunts, planting shrubs, flag displays, and covered walkways. Private downtown organizations ultimately define their success in sales returns alone. Local government is viewed in a facilitative role, and is brought into power only when private power is stalemated. (EGS)

30. PROPERTY HOLDING REAL ESTATE INVESTMENT TRUSTS OPERATING UNDER THE 1960 TAX LAW

Main Investigator: E. Norman Bailey.

Status of Research and Publications: In process.

Agency: Indiana University, School of Business.

Previous Digest Report: None.

Research Problem. This study is concerned with the efficacy of the practices of property holding real estate investment trust; the problems and constraints they have experienced; and their prospects for growth.

Previous Relevant Research. Because of the relative newness of the law which has engendered the propagation of real estate investment trusts, there has not been any published research directly related to the subject area.

Method of Study. The principal sources of information for this study are: (1) personal interviews with the officers of selected real estate investment trusts and their property management firms; and (2) their registration statements and subsequent documents filed with the Securities and Exchange Commission. It is anticipated that the information realized from these and supplemental sources will provide a basis for the analysis and evaluation of the subject trusts and of their prospects. (WGP)

31. SOME ECONOMIC RECONSIDERATIONS OF ZONING--REMEDIAL, EMERGENT, AND UTOPIAN

Main Investigator: Dean Kickenbach.

Status of Research and Publications: Ph.D. dissertation to be completed in August 1963.

Agency: Indiana University, School of Business.

Previous Digest Report: None.

Research Problem. How can zoning be improved and made more effective as a tool to implement city planning?

Method of Study. A survey of the zoning institution is presented. The objectives, formulation, adoption, administration and constitutionality of zoning procedures are critically examined. Economic theory is then applied to the phenomenon of zoning. The concept and impact of external diseconomies in urban property are examined. The hypothesis that imperfections in the urban property market justify zoning is scrutinized. An economic model is developed to indicate the allocative efficiency of zoning. The theory of zoning is applied in two specific areas: (1) the firm as a decision making unit influenced by zoning, and (2) the manner in which zoning influences the municipal tax base. Interrelationships between imperfect zoning and the political process of zoning are examined. Finally, methods to improve zoning are suggested and other conclusions are drawn. (WGP)

32. REMEDIAL PROGRAMS FOR LONG-TERM UNEMPLOYED BLUE-COLLAR WORKERS

Main Investigator: Kenton L. Anderson.

Status of Research and Publications: All data are collected, coded, and punched. A computer program is being written at the present time. Expected completion date, August 1963.

Agency: Indiana University, School of Business.

Previous Digest Report: None.

Research Problem. What types of remedial action, if any, are suggested by a statistical analysis of the labor market experience and the personal and economic characteristics variables for all blue-collar temporary extended unemployment compensation claimants in a major labor market area?

Previous Relevant Research. In general, all the reports required under Section 10 of the Temporary Extended Unemployment Compensation Act of 1961, e.g., Temporary Extended Unemployment Compensation Report Series 1-4, as well as special studies conducted at the state or local level in conjunction with this program.

Method of Study. All skilled, semi-skilled, and unskilled workers last employed in manufacturing and registered for Temporary Extended Unemployment Compensation benefits in the Evansville office of the Indiana Employment Security Division are being studied. Information in their records on labor market experience and personal and economic characteristics (26 variables) was collected, coded, and punched into IBM cards. A program utilizing chi-square techniques will test for significant differences between skill levels on each of these variables. It is believed that these results will suggest certain types of remedial action for the subjects of this study. (WGP)

33. CRITERIA FOR AREA DEVELOPMENT AND REDEVELOPMENT

Main Investigator: Edward E. Laitila.

Status of Research and Publications: Preliminary background study of existing literature completed, including development of extensive bibliography. Completion (including publication as dissertation) expected by January 1964.

Agency: Indiana University, Institute of Applied Urban Economics, under sponsorship of Committee on Urban Economics, Resources for the Future, Inc.

Research Problem. What are the "operationally feasible" criteria of an economic nature which can be used in evaluating and designing area development programs? These criteria would take into account some measure of economic welfare, such as per capita income, as the basis for making both public and private decisions of a developmental nature. In addition, the criteria would be designed to integrate an area's development within the context of national economic development, rather than as an independent economic phenomenon.

Previous Relevant Research. Includes work done under a Committee for Economic Development grant by Donald Gilmore and published as Developing the "Little" Economies by the CED. Also of note is Walter Isard's Techniques of Regional Analysis, and Regions, Resources and Economic Growth by Harvey Perloff and associates at Resources for the Future, Inc. Up to the present time, however, no significant research has been conducted on the problem of discriminating between competing areas and development needs. The purpose of this research will be to formulate criteria which can be applied on the many levels of development effort in the economy, in an attempt to substitute economic for political or other standards.

Method of Study. The study will proceed in a number of stages, commencing with a survey of the existing literature, and extending to an analysis of existing and proposed programs of both a public and private nature at the national, regional, state and local levels. A theoretical model of area development will be prepared, together with theoretical criteria which will fit this model. These will then be applied to current or proposed programs as a test of operational feasibility, with modification where necessary. The final result will be a complete model of area development, embodying the operationally feasible criteria. Since the study is only in the preliminary stages no concrete results can be reported at this time. (WGP)

34. A LONG RANGE PLAN FOR MUNICIPAL SERVICES IN METROPOLITAN INDIANAPOLIS

Main Investigators: Sidney E. Zimbalist and John Walls.

Status of Research and Publications: Part One, Welfare Services, covering seventeen major fields, now available, (Community Service Council of Metropolitan Indianapolis, 615 N. Alabama Street, Indianapolis 4, Indiana, \$1.00 per copy.) Remaining two sections, covering health and recreation respectively now in process.

Agency: Community Service Council of Metropolitan Indianapolis

Previous Digest Report: None.

Research Problem. The long range planning project of the Community Service Council is to provide guidelines for the future development of community service to 1975 for the Indianapolis metropolitan area. Both public and private services are included. For each of the 17 fields of welfare service in the first report, an analysis of services and needs is given, together with a projection of trends and future requirements. Each field is then designated in one of four categories of recommended development: (1) accelerated; (2) normal; (3) status quo; or, (4) curtailment. In addition, sources of financing are given for each field, and a projection of future requirements of increase or decrease is arrived at. The objective is a systematic, comprehensive analysis, in statistical terms where possible, of trends and future service needs and financial requirements for all fields of community service in this metropolitan area. (SEZ)

35. THE GOVERNMENT OF THE CALCUTTA CONURBATION

Main Investigator: Leslie Green

Status of Research and Publications: In process.

Agency: Institute of Public Administration, International Urban Studies Program, under sponsorship of Ford Foundation.

Previous Digest Report: 8:2-90.

Research Problem. To assist the administrative and fiscal phases of the Calcutta planning operation by (a) a study of the organization, powers and resources of governments, statutory bodies and the like, whether central, state or local, operating within the Calcutta conurbation, and (b) an analysis of conflict and cooperation in the political and administrative fields.

Method of Study. The first stage of the project will cover the national and state framework of government (including statutory bodies); the status, size, organization and powers of local bodies; studies of the services of these governments and bodies undertaken within the conurbation; the costs of such services and methods of financing them. The second stage will examine in detail the formal administrative and financial relations obtaining between such governments and bodies, and the informal political and power relationships obtaining between the centre and state, between these authorities and those of the conurbation, and between the members of the conurbation themselves. It is expected that the result will be a series of case studies dealing with conflict and cooperation within the government and administration of the Calcutta conurbation. (LG)

36. DEVELOPMENT PROBLEMS IN THE INDUSTRIAL-POWER BELT, DHANBAD-ASANSOL-DURGAPUR

Main Investigators: Leslie Green, V. N. Prasad, T. C. Das.

Status of Research and Publications: In process.

Agency: Institute of Public Administration, International Urban Studies Program, under sponsorship of the Ford Foundation, and in cooperation with the Indian Institute of Technology, Karagpur; the Indian Institute of Social Welfare and Business Management.

Previous Digest Report: 8:2-90.

Research Problem. To study selected development problems within the Dhanbad-Asansol-Durgapur complex, such as those concerning the relationship between industrialization and urban growth; the development of ancillary economic activities (industrial, commercial, financial and marketing); the supply, composition,

training and turnover of labor; housing and slum clearance; physical planning on a town and regional basis; public administration; public amenities; transport and communications; and public health and welfare, in order to augment knowledge of the wider region within the context of which the Calcutta Metropolitan Planning Organization seeks to solve the development problems of the Calcutta conurbation, and to assist CMPO in that undertaking.

Previous Relevant Research. Diagnostic Survey of the Damodar Valley Region completed on a pilot basis in 1958 by Joint Committee of Government and University bodies under general direction of Professor Prasad. First stage of a study of the socio-economic condition of people living in villages outside the industrial and urban area of Durgapur, "Present and Future Durgapur-A Study of Planned Industrialization in a Rural Area" completed in 1959 by Institute of Social Welfare and Business Management under direction of Professor Das. A critical evaluation of labor welfare programs and their impact on the life of laborers in the Asansol coal mines also completed by same Institute in 1960. Study of rapid urbanization in the Indian steel towns, including Burnpur-Kulti and Durgapur in the Dhanbad-Asansol-Durgapur complex, recently completed by UNESCO Research Center on Social and Economic Development in Southern Asia (Delhi.) Study of inter-group relations at Durgapur also currently underway by Sociological Research Unit of the Indian Statistical Institute. (LG)

37. THE ECONOMIC RELATIONSHIPS BETWEEN CALCUTTA AND ITS HINTERLAND

Main Investigators: Leslie Green, Brian Berry, S. P. Chatterji, N. R. Kar, Ambica Ghosh.

Status of Research and Publications: In process.

Agency: Institute of Public Administration, International Urban Studies Program, under sponsorship of the Ford Foundation.

Previous Digest Report: 8:2-90.

Research Problem. To assist the economic, new town and transportation development phases of the Calcutta planning operation by a thorough analysis of the flows of people, goods and services between the various parts of the Calcutta hinterland and to and from areas outside its borders, with the aim of uncovering (a) rural-urban flows, (b) inter-town flows, and (c) flows to and from the Calcutta conurbation. (LG)

38. IOWA ECONOMIC STUDY

Main Investigators: Not reported.

Status of Research and Publications: In process.

Agency: State University of Iowa, Bureau of Business and Economic Research.

Previous Digest Report: None.

Research Problem. An analysis of the Iowa economy from several points of view. Projections of employment by four digit industrial classification are being made. These in turn are to be disaggregated and allocated to 12 economic areas. A study is also being made of business response to agricultural changes. This will include (1) identifying the type and volume of farm-related businesses in Iowa's towns and cities; (2) projecting changes in such farm-related businesses in the light of possible changes on the farm, in government farm programs, in new tech. logy, in market development, or in management organization and techniques; (3) identifying opportunities for expanding farm-related businesses in Iowa; (4) providing a basis for estimating the economic future of Iowa's smaller towns and cities; and (5) improving the over-all understanding upon which the intelligent action of all decision makers ultimately rests. Finally, the project also includes a county income study. The Bureau is working with the Midwest Research Institute and researchers from five other states to improve allocating methodology and augment social accounting systems by collecting secondary data that is now regularly reported to state agencies. (CCS)

39. VARIATIONS IN DEMOGRAPHIC STRUCTURE WITHIN A METROPOLITAN AREA:
KANSAS CITY

Main Investigator: Michael R. C. Coulson.

Status of Research and Publications: Scheduled for completion in summer of 1963. Report and publications will follow.

Agency: University of Kansas, Department of Geography, in association with Community Studies Inc., Kansas City.

Previous Digest Report: 9:1-31.

Method of Study. An age-structure index has been developed from five year age groupings. It has been found to adequately

describe variations in age structure within the Kansas City tracted area, and is being used as the dependent variable in this study.

Twenty-two variables have been derived from Census data. They describe aspects of sex, race origin, mobility, social status, occupation, density and style of living, for the population.

At present, tests are being carried out on a computer programme, prior to the running of multiple regression analysis. Emphasis will be placed on residuals, and their spatial arrangement. (MRCC)

40. HIGHWAY TRANSPORTATION DEMAND

Main Investigators: A. J. Bone, B. V. Martin and F. W. Memmott, 3rd.

Status of Research and Publications: Project has completed first year of three-year contract. An interim report of the first year's work is in preparation.

Agency: Massachusetts Institute of Technology, Engineering Systems Division, Civil Engineering Department, under sponsorship of Massachusetts Department of Public Works and U. S. Bureau of Public Roads.

Previous Digest Report: 8:2-34.

Research Problem. To develop better techniques for estimating future demand for highway facilities in urban areas. Includes development of a traffic assignment model which incrementally assigns traffic to a highway network taking into account effect of volume on travel time and capacity of system links, comparison of minimum path algorithms to determine their efficiency in terms of computer time and capacity requirements, investigation of volume-delay characteristics, and analysis of continuous traffic volume counts to determine their distributions and to derive a design traffic criteria based on economic considerations rather than magnitude rating, such as 30th highest hour.

Previous Relevant Research. A review and analysis of current methods of traffic estimation and assignment was made and published in Research Report No. 38 of the Joint Highway Research Project of the Massachusetts Institute of Technology and Massachusetts Department of Public Works, "Principles and Techniques of Predicting Future Demand for Urban Area Transportation." 1961. (AJB)

41. THE POTENTIAL IMPACT OF INTERNATIONAL DEVELOPMENT UPON THE DETROIT AREA

Main Investigator: R. L. Meier.

Status of Research and Publications: In process.

Agency: University of Michigan, School of Natural Resources,
Department of Conservation.

Previous Digest Report: None.

Research Problem. What are the tasks that can be of assistance in world-wide development? Which of these is suited for the Detroit area? What action is needed for grasping these opportunities? What impact may be expected in the Detroit region if successful? What risks are run if this action is undertaken?

Method of Study. When projecting a future for a metropolitan area, a skeptical point of view must be maintained. It must look for the constraints upon world trade that lie beyond any ability of the city or the state to modify. The scale of these pared-down opportunities must be assessed. A program for development in the direction of international development must be outlined which utilizes the natural, human, and institutional resources that are on hand.

The specific tasks that can be foreseen at this stage are the following: (1) What is the probable level of structural unemployment for the Detroit region for 1970-75? What minima and maxima should be considered for planning purposes? (The range is expected to be so large that sophisticated techniques need not be applied to the data for our purposes.) (2) How is the composition of this resource changing? (Age, sex, experience, etc.) In what urban locales will it reside? (3) What is the projected rate for installing electric power equipment in newly developing territories? What share of this is likely to be nuclear? What specifications seem to be required? (4) How is this newly generated electrical current to be utilized? What equipment cannot be produced readily in a newly developing country? (5) What institutional experience in the Detroit area is relevant? Where in the developed world does the competition exist? What competitive advantages can be found? (6) What other "growth exports" of hardware can be identified in the breakdowns of international trade? Are any of these relevant to the Detroit area? (7) What are the trends in the training of foreign students? It is suspected that Michigan is principally teaching the teachers. Are there opportunities for producing teaching materials to go with the knowledge that is required? Is this opportunity sizeable?

(8) Are there any opportunities for tourism which depend upon international development that can be exploited? (9) How would the exports of hardware, software, and services be financed? Will the modes of finance affect the scale of export or the mix? (10) Is there any systematic approach to such problems which should be used if a more thoroughgoing study were to be undertaken? (RLM)

42. STUDY TEXT OF TOWNSHIP ZONING REGULATIONS

Main Investigator: Robert B. Hotaling.

Status of Research and Publications: In process.

Agency: Michigan State University, Continuing Education Service, Institute for Community Development and Services.

Previous Digest Report: None.

Research Problem. To determine the most appropriate "Level Variation" of zoning regulations pertinent to urbanizing or fringe area metropolitan communities with emphasis on the Michigan Township.

Method of Study. Using a model set of basic zoning regulations and progressively using successively improved study texts in a series of communities in Michigan with the help of local study groups. (WEF)

43. GOVERNMENTAL DECISION MAKING AND RELATED POLITICAL ACTIVITY IN THE METROPOLITAN AREA FRINGE

Main Investigators: Alvin D. Sokolow, Charles Press, Clarence Hein.

Status of Research and Publications: In process.

Agency: Michigan State University, Continuing Education Service, Institute of Community Development and Services, under sponsorship of U. S. Department of Agriculture, Farm Economics Division.

Previous Digest Report: None.

Research Problem. A comparative study of governmental decision making and related political activities in three townships extending out from a core city (Lansing, Michigan) in a metropolitan area.

Hypothesis. The general hypothesis is that governmental functions, decision making patterns, and political activities vary with the extent of urbanization (or more appropriately, suburbanization) ranging from an area adjacent to the core city to a "fringe" location. The three townships form an urban-rural "gradient." Activities of township, school district, and county government agencies are being studied.

Method of Study. Structured and unstructured personal interviews of governmental officials and other local elites, and examination of various kinds of documents. (WEF)

44. ECONOMIC IMPACT OF INTERSTATE HIGHWAY ON LAND USE AND LAND VALUES

Main Investigators: Paul R. Lowry and David McKinney.

Status of Research and Publications: Project is of indeterminant length; another report will be published in 1963.

Agency: University of Mississippi, School of Business and Government, Department of Research in Business and Government.

Previous Digest Report: None.

Research Problem. To study impact of interstate highway on land use and land values in an urban area (Jackson, Hinds County, Mississippi).

Previous Relevant Research. Studies of residential property values remaining in the area of a planned interchange and socio-economic consequences of displaced home owners in same urban area. The studies are predicated on the hypothesis that there will be some kinds of economic impact on the area through which the interstate highway passes.

Method of Study. This particular phase of the study will investigate property sales in a five-year period. Changes in land use will be studied by observation, analysis of aerial photographs and tax records, and by opinion surveys of residents and business owners in the area. (DSV)

45. SALES-RATIO STUDY OF ASSESSMENTS FOR STATE TAX PURPOSES

Main Investigator: Paul R. Lowry.

Status of Research and Publications: In process. Estimate completion date, January, 1964.

Agency: University of Mississippi, School of Business and Government, Department of Research in Business and Government, Bureau of Business and Economic Research.

Previous Digest Report: None.

Research Problem. This project will attempt to make a determination of the level of assessment of real property in each Mississippi county and in the whole of the state.

Hypothesis. The study is predicated on the hypothesis that there are assessment inequities among the counties and that the assessments do not conform to the requirements of the state statutory standard.

Method of Study. The study will attempt to relate the true value of the property as determined by open market sales to the assessed value of the property for state ad valorem purposes in the same year that the sale occurs. (DSV)

46. THE POLITICS OF CHANGE: THE EFFECT OF MIDDLE-INCOME APARTMENT DWELLERS ON SLUM AREA POLITICS

Main Investigator: Richard A. Watson.

Status of Research and Publications: Monograph completed, to be published by Community Studies, Inc. of Kansas City.

Agency: University of Missouri, Department of Political Science, under sponsorship of Community Studies, Inc. of Kansas City.

Previous Digest Report: None.

Research Problem. To determine political changes associated with the location of a middle-income apartment development in the heart of a slum area of Kansas City, Missouri.

Previous Relevant Research. To the author's knowledge no previous research on this particular problem has been published. Of course, general studies relating social class to political behavior are relevant.

Hypotheses. Hypotheses were developed around three major subject areas: (1) Partisan Change. The introduction of the middle-income apartment into the slum area politics will result in gains for the Republican Party and for the local Citizens' Association, which tends to attract persons from middle-income levels. Political

organizations will make adjustments to deal with the new clientele.

(2) Political Participation. Middle-income people would be generally more interested in political matters than those in low income groups, but most of this interest would be focused at the national and state levels, rather than at the local level.

(3) Substantive Policy Issues. Low and middle-income voters living in the redeveloped area will have essentially disparate value systems and that this would be reflected in their attitude toward important issues at the local level.

Method of Study. Three major sources of data were utilized: (1) Election statistics, including general voting results in the area under consideration, as well as individual voting records. (2) Interviews with political party workers, and political candidates. (3) A sample survey of registered voters living in the area.

Major Findings. (1) Partisan Change. Significant inroads have been made into the overwhelming superiority of the Democratic Party. The political impact has been even greater at the local level in favor of the Citizens' Association which attracts not only Republicans, but also some middle-income Democrats. The Democrats and local Democratic Coalition organizations have recruited a different kind of political worker and use generally different tactics on the new group than are employed with the low income persons. The Republican and the Local Citizens' Association organizations have not taken full advantage of the potentialities for political support represented by the new apartment residents. (2) Political Participation. The hypotheses in this area were generally validated. The orientation of the middle-income persons toward national and state, as compared to municipal, politics was reflected in voting turnout patterns for different elections and by their knowledge of national as compared to local political leaders. Surprisingly, both middle and low income groups in the area had a higher electoral turnout in all elections examined (including municipal ones) than the electorate of Kansas City at large. (3) Substantive Policy Issues. The hypotheses in this subject area were generally confirmed. The new apartment dwellers placed an emphasis on non-conflict and honesty in the handling of public business, while the low income persons living in the neighborhood were more concerned with such "bread and butter issues" as slum clearance, hospitals, etc.

The final portion of the study attempts to relate the findings of this particular study to some possible trends in urban politics and suggests that middle-income apartment developments may act as a future source of countervailing political power against the low income groups that have tended to dominate the central cities of our nation in recent years. (RAW)

47. OCCUPATIONAL EMPLOYMENT PROJECTIONS FOR SOUTHERN STATES

Main Investigators: Mannie Kupinsky, Paul Schweitzer.

Status of Research and Publications: Preliminary planning and collection of data under way.

Agency: National Planning Association.

Previous Digest Report: 9:2-55.

Research Problem. Analysis of state changes in occupational distribution of employment under the impact of emerging economic conditions such as new technologies, changing consumption habits, interregional migration of plant and people, and the private and public policies designed to adjust to these changing conditions. (SS)

48. REGIONAL ECONOMIC PROJECTIONS SERIES

Main Investigators: Sidney Sonenblum, Mannie Kupinsky.

Status of Research and Publications: Total employment for 1947, 1957, 1960 and 1976 estimated for each state by major industry division and two-digit manufacturing industries. Personal income and components (such as labor income, proprietors' income, etc.) and gross product originating and components (such as employee compensation, dividends, interest, etc.) estimated for each state for 1947, 1957, and 1976. Total population projected to 1976 for each state. Estimates of age and sex distribution in 1976 for each state in preparation. The employment, income, gross product originating, and population data with analyses of these data comprise the 1962 edition of the Regional Economic Projections Series. The first report of the Series covering employment has been published. The second report covering income and output will be published in March 1963. The Series is available on an annual subscription basis.

Agency: National Planning Association.

Previous Digest Report: 9:2-56. (SS)

49. SUSQUEHANNA AND CHESAPEAKE RIVER BASINS ECONOMIC BASE STUDY

Main Investigator: Louis H. Stern.

Status of Research and Publications: Development of techniques and collection of basic data now under way. Study to take two and one-half years.

Agency: National Planning Association.

Previous Digest Report: None. (SS)

50. ESTIMATING THE NUMBER OF BUSINESS ESTABLISHMENTS IN NEBRASKA

Main Investigators: Edgar Z. Palmer, C. H. Lee.

Status of Research and Publications: Study has been completed and is now in the hands of the printer. Expected to be available in April, 1963.

Agency: University of Nebraska, College of Business Administration, Bureau of Business Research, under sponsorship of Small Business Administration.

Previous Digest Report: 8:1-38; 8:2-70.

Research Problem. To develop a method by which Bureaus of Business Research might find the answer to the question frequently asked: How many business establishments does X city or village have?

Previous Relevant Research. A somewhat similar study was done earlier by the Bureau of Business Research at the University of Nebraska and published as Business Research Bulletin No. 57 under the title, TYPES OF BUSINESS IN NEBRASKA TOWNS. This study is now out of print.

Hypothesis. The hypothesis was that, through a fairly detailed testing of several sources of information in one or more cities, a choice, or choices, of procedures would be arrived at which could feasibly be used in other cities or states to give satisfactory estimates of the number and types of establishments to be found there at that time.

Method of Study. A pilot study of available sources of information was conducted in Lincoln, Nebraska. The procedure involved making a card for each of the business establishments listed by any of the information sources. Each card indicated which of the sources listed the given establishment. Through a detailed analysis of these cards, the various sources and possible combinations of sources were appraised with respect to completeness of coverage, reliability, and other factors. The

choice, then, rested on completeness of coverage, work involved in getting the relevant data, and availability in different cities and areas.

Major Findings. Considering the various limitations of each source, it was recommended that a combination of two sources be used rather than a single one. In areas where city directories are available the most satisfactory combination appeared to be the City Directory and the Dun & Bradstreet Rating Book. For other cities a combination of the Rating Book and the Telephone Directory was recommended. In estimating totals for the state and average numbers of establishments of given types, by size of city, a sampling procedure was suggested. Sampling might also be used in a large city, such as Omaha, to reduce the labor involved. (EBS)

51. THE OMAHA REAL ESTATE MARKET, 1950 to 1960.

Main Investigators: Edgar Z. Palmer, Francis X. Murray.

Status of Research and Publications: Study is nearing completion and is expected to be published in May, 1963. (Research Bulletin No. 69).

Agency: University of Nebraska, College of Business Administration, Bureau of Business Research.

Previous Digest Report: 9:2-88.

Research Problem. This project is a study of the private real estate market in Omaha from 1950 to 1960. The purpose of the study is to examine real estate transactions and to determine the cause and effect relationships operating in the market. Among these are the factors which best explain variations in sale price and general indicators of the condition of the market at any particular time.

Method of Study. The study is divided into two major sections. The first section consists of Classification and Results in which all the data are classified and grouped according to their various attributes, regardless of the time of the listing or sale. The second section is a breakdown of the data into quarters based on the date of the listing. The sample of listings was selected from the files of the Omaha Realty Exchange Board.

Three indicators of market acceptance of particular types and classes of houses are employed: (1) the percentage of listed houses which were sold, (2) the time required to complete the sale, and (3) the percentage of the asked price received for

the sale. These indicators are also applied to the quarterly data to determine significant movements in the market over the period studied, 1950 to 1960. Time series analysis is also applied to all the quarterly data to determine trend and cycle movements.

Major Findings. The following major conclusions and findings of the study with respect to the period covered seem to be justified: (1) location was the most important factor in determining selling price. (2) the average sale price was approximately 95 per cent of the list price. (3) higher priced houses were more difficult to market. (4) the average time required to complete a sale was a little more than 57 days. (5) the price movements of unsold houses displayed reverse relationship to the Omaha business index fluctuations. (6) the average number of rooms per house sold increased over the period studied by almost 10 per cent.

In addition it has been noted that the time required to complete a sale and the percentage of list price received gave a good indication of the general condition of the real estate market. (EBS)

52. THE SETTING FOR REGIONAL PLANNING IN NEW JERSEY

Main Investigator: James W. Collins.

Status of Research and Publications: Project was completed December, 1961, and available for publication March, 1962, report consists of 99 pages of text and illustrations available at \$4.00 per copy from the Division of State and Regional Planning.

Agency: State of New Jersey, Department of Conservation and Economic Development, Division of State and Regional Planning, with the assistance of an urban planning grant from the Housing and Home Finance Agency under Section 701 of the Housing Act of 1954 as amended.

Previous Digest Report: None.

Research Problem. The report investigates and delineates areas recommended for regional planning purposes in and about the state of New Jersey, and includes recommendations as the potential relationship of regional planning to existing levels of government.

Previous Relevant Research. A number of individual research projects preceded the preparation of the final report. Analysis of

the geographical patterns of newspaper distribution, retail sales, bank service areas, hospital service areas, telephone volumes and free calling areas, regional high school service areas, labor market areas, joint Chambers of Commerce service areas, radio coverage, traffic studies, and service areas of many social and professional organizations each undertaken. An early draft summarizing a number of these factors was entitled, An Approach to Statewide Regional Planning in New Jersey dated June 3, 1960, prepared by A. Sheybani (this report is not available for distribution)

Hypothesis. The major hypothesis of this report is that urban cores and their tributary areas, aside from existing political subdivision boundaries, constitute the logical areas in which regional planning could be most effective.

Method of Study. The elements of individual analyses and their integration into a system of interrelated findings is presented in summary fashion within the report. Many, but not all working maps and analysis which went into the study are illustrated in the final report. By examining any number of factors which should identify these areas the analysis yielded not only a delineation of these areas but a concept involving the relative importance of major and minor centers and sub-centers.

Major Findings. After delineating suggested regional planning areas it was concluded that regional planning could be accomplished within the framework of existing government providing the planning function were to involve the cooperative participation of more than one level of government. Interstate, intercounty, and intermunicipal planning regions were defined and interrelated to appropriate federal, state, local and county participation according to the scale and magnitude of each region. Regional planning in each of these regions would be devoted to specialized functions, with interstate regional planning being that which is needed in the New York and Philadelphia metropolitan regions. The intercounty regions delineated are essentially the semi-independent, socio-economic units, each having one of the major urban centers of the state. Eighteen such regions are delineated within the state of New Jersey. Intermunicipal regions are essentially groups of closely related municipalities which usually have one minor center as a focus. State and federal governments are visualized as being appropriate levels of government to participate in the interstate planning regions while the state and counties are considered appropriate participants for the intercounty planning. Intermunicipal regions for the most part would be a function of county planning.

A number of natural regions were also designated. These are distinguished from the urban center regions and identified as homogeneous rather than heterogeneous areas. They are essentially areas without any major concentration of population, in which large percentage is governmentally owned. Conservation needs and the rural economy would be given emphasis in planning these regions as compared to the need for planning for and developing a comprehensive urban framework in the urban centered regions. (JWC)

53. THE IMPACT OF POPULATION AND ECONOMIC GROWTH ON THE PHYSICAL ENVIRONMENT OF NEW JERSEY

Main Investigator: Alan Walter Steiss.

Status of Research and Publications: Text and illustrations completed, currently being reviewed by a technical sub-committee of the Governor's Interdepartmental Committee for State Planning. Anticipated date of publication--summer 1963.

Agency: State of New Jersey, Department of Conservation and Economic Development, Division of State and Regional Planning with the assistance of an urban planning grant from the Housing and Home Finance Agency, under Section 701 of the Housing Act of 1954, as amended.

Previous Digest Report: None.

Research Problem. Between 1950 and 1960, 1,231,453 people were added to the population of the State of New Jersey, the greatest increase of any decennial period in the history of the State and equivalent to the total population inhabiting New Jersey at the turn of the century. It is the concern of this study to examine the impact of this growth in population on the physical and economic environment of the state, and, in turn, to provide some insight into the ramifications of the latter upon the future growth in population.

Method of Study. Primarily, this study is an inventory of all of the pertinent writings on the subject of New Jersey's people and economy. An effort has been made to draw certain interrelationships among these diverse writings and to point up areas of conflicting opinions, and gaps in the existing knowledge about the subject. Over two hundred separate sources have been reviewed, compared, and analyzed. The report is divided into five main topics: (1) National Considerations; (2) New Jersey and Megalopolis; (3) New Jersey--Its People; (4) New Jersey--Its Economy; and (5) The Counties and Regions of New Jersey.

Preliminary Findings. Three major factors appear to account for the fact that New Jersey has not been as adversely affected as many neighboring states have been by the westward shift of population which has occurred in the United States in the past several decades: (1) the strategic location of the state in the urban complex of the eastern seaboard; (2) the predominance of "growth" industries in the state's economic base; (3) the over-all industrial diversification of the state.

Based on an analysis of the existing conditions and trends, it has been estimated that New Jersey will add another 3,000,000 people to its already swollen population in the next 20 years. Nearly 1,000,000 dwelling units will have to be added to the current supply to meet the potential demands in 1980. Since over half of the state's population growth will result from natural increase, the existing school systems of the state must be expanded to accommodate a million and a half students by 1980, a 50 per cent increase over current enrollment. Nearly a million persons can be expected to be added to the state's present labor force in the next 20 years. An increasing number of these wage earners will be seeking employment in the white collar job categories. With the predicted shorter work week, an increased demand for recreational facilities is also anticipated. One hundred seventy-two additional acres of open space land will be needed at the state, county and local level to accommodate current deficits and meet future demands.

In the future, New Jersey's relative position in the nation's economy will continue to depend upon the vitality of the state's manufacturing activities. It is anticipated that over 400,000 additional jobs in manufacturing must be created to meet the growth in population. However, in the growing competition among the states for industrial rateables, secondary economic activities will be called upon to carry an ever increasing portion of the economic burden. (AWS)

54. GUIDELINES FOR THE FUTURE DEVELOPMENT OF THE NEW YORK METROPOLITAN REGION

Main Investigators: John P. Keith, Stanley B. Tankel, Dick Netzer, Boris Pushkarev, William B. Shore.

Status of Research and Publications: Spread City, Regional Plan Association's Bulletin 100, projecting population, employment, and land use trends by county for the 22-county region to 1985, assuming that current economic trends, popular taste, and public and corporate policies continue, was published in September, 1962. The Goals for the Region Project,

a discussion-group program to determine the preferences of citizens for future patterns of regional development, is in process.

Agency: Regional Plan Association, Inc., with cooperation of Harvard Graduate School of Public Administration and Columbia University Bureau of Applied Social Research.

Previous Digest Report: None.

Research Problem. Formulation of guidelines for development of New York Metropolitan Region to 1985.

Previous Relevant Research. The nine-volume New York Metropolitan Region Study, carried out by the Harvard Graduate School of Public Administration between 1956 and 1959 under the direction of Raymond Vernon and published between 1959 and 1961, provided an exhaustive economic and demographic analysis of the New York Region and projected population and employment in the Region to 1985. The Race for Open Space, RPA Bulletin 96, 1960, projected park and open space requirements for the New York Metropolitan Region through 1985, based upon a survey of present recreation, conservation and open space. Commuter Transportation, a report to the Senate Committee on Interstate and Foreign Commerce, 1961, was a survey of commuter transportation facilities and problems in the New Jersey-New York-Connecticut Metropolitan Region with suggested solutions, prepared by Regional Plan Association.

Method of Study. The economic and demographic trends in the New York Metropolitan Region have been analyzed, and the pattern of "spread city" toward which they are leading has been described. The current phase of the study is the Goals for the Region Project, designed to determine the preferences of the citizens of the Region for place of residence, types of housing and yards, travel within the Region to both urban and rural places, modes of transportation to work, place of work, etc. The method being used is as follows: Approximately 1,000 study groups of five to 15 people each will meet weekly for five weeks (during April and May, 1963) for two hours each week to watch a special television program about the development of the Region, to discuss questions relating to the program and to the background reading completed before the meeting, and to fill out questionnaires concerning each participant's views on aspects of the Region's development. The questionnaires will be analyzed and interpreted by Columbia University's Bureau of Applied Social Research. (SHS)

55. URBAN GROWTH DYNAMICS IN A REGIONAL CLUSTER OF CITIES

Main Investigators: Lowell D. Ashby, Kurt W. Back, Charles E. Bowerman, Robert L. Bunting, F. Stuart Chapin, Jr., Frederic N. Cleaveland, Robert T. Daland, David G. Davies, John Gulick, E. William Noland, John A. Parker, William N. Parker, Ralph W. Pfouts, Bradbury Seasholes, Richard L. Simpson, Benjamin Walter, Shirley F. Weiss and Robert L. Wilson.

Status of Research and Publications: Symposium volume, published on December 10, 1962, covers studies completed under a grant from the Ford Foundation: F. Stuart Chapin, Jr., and Shirley F. Weiss, editors. Urban Growth Dynamics in a Regional Cluster of Cities. New York and London: John Wiley and Sons, Inc. \$8.95.

Agency: University of North Carolina, Institute for Research in Social Science, Urban Studies Program.

Previous Digest Report: 4:2-40; 7:1-23; 7:2-42; 8:2-75; 9:1-52.

Method of Study. The symposium volume, with chapters written by the 18 main investigators, provides an underlying theoretical organization for the study of the complex ways in which economic development, political control processes, social change and expansion in the physical setting of cities are interrelated. At the same time it focuses on the kinds of conditions, situations and methods of urban change being faced in the Piedmont Industrial Crescent, a regional cluster of cities experiencing strong urbanization pressures for the first time.

The material is organized around four basic policy questions which must increasingly be dealt with by civic leaders in an urbanizing region: What is the growth potential of the region and the economic variables regulating this growth potential? What are the socio-political factors that affect the extent to which the potential may be realized? What are the social correlates of growth of this kind and what are the implications for urban living patterns? What are the factors which govern the physical expansion of urban areas and in what ways may these findings assist in charting growth for the future?

While drawing on current theory in the social sciences, Urban Growth Dynamics places an emphasis on empirical research, reflecting a conviction of the authors that theory must be developed in close contact with reality. (FSC, Jr., and SFW)

56. SOCIAL STRUCTURE OF URBAN SOCIETY: KINSHIP AND VOLUNTARY ORGANIZATION

Main Investigators: Scott Greer and Robert F. Winch.

Status of Research and Publications: Field work in process.

Agency: Northwestern University, Center for Metropolitan Studies.

Previous Digest Report: None.

Research Problem. What is the distribution of voluntary organizational membership types of kinship structure among the sub-areas of American cities? What relevance do these social structures have for, e.g., response to widespread disaster?

Hypotheses: They vary by social area attributes--social rank, ethnicity, lifestyle. They provide the grassroots for informal and formal organizational response to disaster. (SG)

57. SOCIAL DIFFERENTIATION IN KINGSTON, JAMAICA

Main Investigator: Dennis McElrath.

Status of Research and Publications: In process.

Agency: Northwestern University, Center for Metropolitan Studies.

Previous Digest Report: None.

Research Problem. Examination of patterns of social differentiation in Kingston, Jamaica by analysis of sub-area and individual data collected in the 1960 Census of Population. (DM)

58. SOCIAL DIFFERENTIATION IN ROME, ITALY

Main Investigator: Dennis McElrath.

Status of Research and Publications: One article ASR June, 1962.
Analysis continues.

Agency: Northwestern University, Center for Metropolitan Studies.

Previous Digest Report: None.

Research Problem. Examination of patterns of social differentiation in Rome by analysis of sub-area data from 1952 and 1960 Census of Population. (DM)

59. SOCIAL DIFFERENTIATION IN ACCRA GHANA

Main Investigator: Dennis McElrath.

Status of Research and Publications: In process.

Agency: Northwestern University, Center for Metropolitan Studies
and Center for Social Science Research in Africa.

Previous Digest Report: None.

Research Problem. Examination of patterns of social differentiation in Accra by analysis of sub-area and individual data collected in the 1960 Census of Population. Forms of differentiation examined include social rank, urbanization, migrant status, and ethnic status. Findings indicate, among other things, the paramount role of migration in differentiation structure of Accra. (DM)

60. POLITICAL INTEGRATION AND THE PLURAL COMMUNITY: A STUDY OF INTEGRATIVE MECHANISMS IN MULTI-MUNICIPALITY SUBURBAN HIGH SCHOOL DISTRICTS.

Main Investigator: Louis H. Masotti.

Agency: Northwestern University, Center for Metropolitan Studies.

Previous Digest Report: None.

Research Problem. What are the important formal and informal integrative mechanisms in a plural political system? What are the implications for the organization of political systems?

Hypotheses. (1) The formal integrative structure (i.e. the "constitution") of a plural community does not effectively counter-act tendencies within the social and political structures toward disintegration of the community. (2) Integrative mechanisms within its social structure (e.g. homogeneous populations, multiple loyalties) and political structure (cosmopolitan leadership, communication network) increase the probability that a plural community will be effective.

Method of Study. Interviews with community actors; content analysis of community newspapers (18 years); census tract analysis; historical document research. (LHM)

61. ANALYSIS AND SYNTHESIS OF VISUAL PERCEPTION AND ENVIRONMENTAL DESIGN RELATIONSHIPS

Main Investigators: Arnall T. Connell and Richard A. Miller.

Status of Research and Publications: General investigations complete; first draft of findings in formative stage; limited issue report planned for 1964 printing, hopefully to be followed by a traveling exhibit.

Agency: Ohio State University, College of Engineering, Engineering Experiment Station, under sponsorship of New York Chapter, American Institute of Architects.

Previous Digest Report: None.

Research Problem. (1) to sort out of the science of visual perception those concepts and principles which should be treated more formally within the design curriculum in architecture, landscape architecture and city planning; and (2) to find methods and techniques for effectively doing it.

Method of Study. (1) Systematic review of the literature and consultation with scientists and teachers in the field of visual perception. (2) Comprehensive questionnaire survey of design curricula offered at schools of architecture. (3) Perception testing of controlled student groups. (ATC)

62. LOCAL GOVERNMENT IN THE PENJERDEL REGION

Main Investigators: Edwin Rothman, Mitchell J. Hunt, Harris I. Effross, and Paul Dolan.

Status of Research and Publications: Scheduled for completion in summer of 1963.

Agency: Pennsylvania Economy League (Mr. Rothman and Mr. Hunt); Rutgers - the State University, Bureau of Government Research (Mr. Effross); and University of Delaware, Department of Political Science (Mr. Dolan), under sponsorship of the Pennsylvania-New Jersey-Delaware Metropolitan Project, Inc. and the Smith, Kline and French Foundation.

Previous Digest Report: None.

Research Problem. An exploration of the adaptability of local government in the Penjerdel region, as measured by demonstrated capacity to cope with new or expanded problems during the period 1950-1962. (JWB)

63. THE ORIGIN AND DEVELOPMENT OF A SUBURBAN COMMUNITY

Main Investigator: Herbert J. Gans.

Status of Research and Publications: In process. The Pennsylvania-New Jersey-Delaware Metropolitan Project, Inc. has given Dr. Gans a grant to complete his interviewing and bring his manuscript to publication.

Agency: University of Pennsylvania, Institute of Urban Studies.

Previous Digest Report: 5:2-18. (JWB)

64. UNCLASSIFIED DEFENSE CONTRACTS: AWARDS BY COUNTY, STATE, AND METROPOLITAN AREA OF THE UNITED STATES, FISCAL YEAR 1962

Main Investigators: Walter Isard and Gerald J. Karaska.

Status of Research and Publications: Major project was initiated in 1960. This monograph is an interim report and was published in December of 1962.

Agency: World Friends Center, Inc., G.P.O. Box 7376, Philadelphia 1, Pennsylvania; University of Pennsylvania, the Wharton School, Regional Science Department.

Previous Digest Report: 9:2-102.

Research Problem. This monograph is an interim report of detailed studies concerned with the impacts of defense expenditures upon local and regional economies. The main body of this report consists of two lengthy tabulations of values of unclassified defense contracts for fiscal year 1962. The data were taken from the Commerce Business Daily and they cover roughly 40 per cent of all prime contracts awarded by the Department of Defense. (Adjustment factors are included to and in the estimation of total prime defense contracts.) One set of data is a tabulation by four-digit Standard Industrial Classification (SIC) for each county and state of the United States, and a similar tabulation is presented for 210 Standard Metropolitan Statistical Areas.

Previous Relevant Research. A companion volume was published in 1961 which reported similar data for all prime military contracts for fiscal year 1960, viz., Walter Isard and James Ganschow, Awards of Prime Military Contracts by County, State and Metropolitan Area of the United States, Fiscal Year 1960, (Regional Science Research Institute, G.P.O. Box 8776, Philadelphia 1, Pennsylvania).

Major Findings. This report is primarily a tabulation of unclassified defense contracts for counties, metropolitan areas, and states by four-digit SIC. For example, it shows that Allegheny County, Pennsylvania, received \$71,387,658 in unclassified prime defense contracts, of which \$32,865,782 were awarded to SIC industry 3619 (electrical equipment, n.e.c.); and, \$246,858,841 in unclassified contracts were awarded to the Chicago SMSA, of which the largest share, \$39,295,983, went to SIC industry 2911 (petroleum refining). Although the data are presented in unanalyzed form, the authors include descriptive materials which take the form of maps and location quotients and serve as measures of the geographic distribution of defense contracts. (GJK)

65. ECONOMIC ANALYSIS FOR COMMUNITY RENEWAL PLANNING

Main Investigators: Benjamin Chinitz, William C. Pendleton.

Status of Research and Publications: Study begun in January, 1963.
Detailed planning currently taking place.

Agency: University of Pittsburgh, Center for Regional Economic Studies, under sponsorship of Department of City Planning, Pittsburgh, Pennsylvania.

Previous Digest Report: None.

Research Problem. The primary objective is to develop a computer simulation model that can be used in predicting the impacts of alternative urban renewal programs. An attempt will be made to adapt micro-analytic systems techniques to the problems of urban residential migration and commercial and industrial land use. Projections of employment, population, retail trade, and municipal fiscal prospects will be made in support of the simulation effort. (WCP)

66. MATERIALS FOR STATE OF THE REGION REPORT AND MESSAGE

Main Investigator: Charles L. Leven.

Status of Research and Publications: Begun September, 1962; to be completed December, 1963. Product will be submitted to Southwestern Pennsylvania Regional Planning Commission for incorporation in publications in 1964.

Agency: University of Pittsburgh, Center for Regional Economic Studies, on contract for Southwestern Pennsylvania Regional Planning Commission. (a)

(a) See below, Item 70 for additional information on this project.

Previous Digest Report: None.

Research Problem. To prepare materials for state of the region report and message, including analysis of the economic structure and development of the Pittsburgh Region, and identification of important economic problems and development opportunities; assets and liabilities of the Pittsburgh Region from the standpoint of economic development; economic goals and policies; evaluation of the possible need for a regional data center, and prospectus therefor; and prospectus for development of regional accounts and evaluation of applicability of further model simulation and systems analysis techniques to the region's economy. (EMH)

67. COMPUTERIZED MODEL FOR GAMING THE PHYSICAL DEVELOPMENT OF A COMMUNITY

Main Investigator: Nathan D. Grundstein.

Status of Research and Publications: Research in process.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Institute of Local Government.

Previous Digest Report: None.

Research Problem. Construction of a computerized model of a suburban community, surrogate for a class of communities, for purpose of simulating its physical development over time. To permit the participants to play the development of the community under semi-deterministic conditions with no authoritative planning outcome, and with the development dependent on the skill and preferences of the players. (NDG)

68. LOCAL ORGANIZATION FOR URBAN RENEWAL

Main Investigator: George S. Duggar.

Status of Research and Publications: In process.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Institute of Local Government.

Previous Digest Report: 3:1-29; 4:1-2; 7:1-1.

Research Problem. To examine changes in organization over time and intercultural differences.

Previous Relevant Research. Research done in 1956 by a group of investigators led to publication of the following, based on comparative study: "Urban Renewal: Current Criticism, and the Search for a Rationale," Public Management, September, 1962; "Administrative Organization for Planning" in ASPO, Planning, 1962; "The Relation of Local Government Structure to Urban Renewal," reprinted by University of California Bureau of Public Administration from Law and Contemporary Problems, Winter, 1961; "Federalism and Self-Government in the United States: Urban Renewal as an Example" reprinted by University of California from Jahrbuch des Offentlichen Rechts v. 10, 1961; "Local Organization for Urban Renewal" Public Management, July, 1958; "Local Leadership for Urban Renewal" Western Political Quarterly, June, 1958; Urban Renewal Administration: Provisions in Redevelopment and Housing Statutes of Seven States UC Bureau of Public Administration, 1957; "Renewal, the Planner, and Public Management" in AIP, Proceedings, 49th Meeting, 1957; and "Urban Renewal Re-Examined" in ASPO, Planning, 1957.

These studies developed the structural concepts of "civic enterprise," "core," and "net" and a leadership concept which makes authority the chief link between successive moments of committed action and bridging the chief link between organizations in a common civic enterprise.

The next effort is to further abstract and generalize and to utilize the process concepts to describe leadership and change in organization, again using urban renewal data. A first step is the unpublished article "The Politics of Urban Renewal: Suggestions for a Conceptual Scheme" APSA, 1961. This examines the significance for power and authority of such departures from role as bridging. (GSD)

69. SOCIAL AND PSYCHOLOGICAL FACTORS IN URBAN CONSERVATION

Main Investigators: Professors Herbert Maccoby, Bernard Mausner, and Maurice Shapiro.

Status of Research and Publications: A preliminary research report will be available in July.

Agency: University of Pittsburgh, Graduate School of Public Health, with the research supported by a grant from the National Institutes of Health, with the cooperation of the Graduate School of Public and International Affairs, Institute of Local Government.

Previous Digest Report: 9:2-116. (HM)

70. STATE OF THE REGION PROJECT

Main Investigators: Pamela J. Hitchcock and R. J. T. Longabaugh.

Status of Research and Publications: Project began September, 1962, to be completed early in 1964. A "State of the Region Message" accompanied by a detailed report of project findings will be published upon completion of the project.

Agency: Southwestern Pennsylvania Regional Planning Commission, with consulting services of Center for Regional Economic Studies, University of Pittsburgh, and under sponsorship of the Ford Foundation.

Previous Digest Report: None.

Research Problem. The Southwestern Pennsylvania Region is facing serious problems of chronic unemployment and general economic and physical decline. The State of the Region Project is designed to affix dimensions to each problem and develop a regional consensus on the relative importance and priorities to be given to each one in formulating development goals for the region. The potentials of the region, and how they might best be maximized, will also be examined. After goals for the region are established, the framework and activities required to accomplish the goals will be developed.

To facilitate the description of the project and to assist in the programming of work and output, the project has been divided into seven principal elements as follows: (1) Goals and Policies for the Region; (2) A Prospectus for a Regional Data Center; (3) A Prospectus for the Application of Analytical Systems Techniques to Regional Planning; (4) A Prospectus for a Regional Leadership Survey; (5) A Prospectus for an Attitudinal Survey of the Region; (6) A Proposal for the Institutionalization of the Project; and (7) The State of the Region Report and Message.

Previous Relevant Research. The Regional Economic Study prepared for the six counties of Allegheny, Armstrong, Beaver, Butler, Washington and Westmoreland in southwestern Pennsylvania by the Pittsburgh Regional Planning Association under the direction of Dr. Edgar M. Hoover. (PJH)

71. SERVICE AREAS IN THE PENJERDEL REGION

Main Investigator: John E. Brush.

Status of Research and Publications: Scheduled for completion in the summer of 1963.

Agency: Rutgers - The State University, Department of Geography,
under sponsorship of the Rutgers Research Council and the
Pennsylvania-New Jersey-Delaware Metropolitan Project, Inc.

Previous Digest Report: None.

Research Problem. A comparative study of service areas and
functions of outlying urban centers in the periphery of the Penjerdel
region. (JWB)

72. LOCAL GOVERNMENT IN THE PENJERDEL REGION

Main Investigator: Charles E. Gilbert.

Status of Research and Publications: Scheduled for completion in the
fall of 1963.

Agency: Swarthmore College, Department of Political Science, under
sponsorship of the Pennsylvania-New Jersey-Delaware Metropolitan
Project, Inc.

Previous Digest Report: None.

Research Problem. A study of political organization and
competition in local government in the Penjerdel region. (JWB)

73. INTERLOCAL COOPERATION IN METROPOLITAN AREAS

Main Investigators: Roscoe Martin, Alan K. Campbell and Jesse Burkhead.

Status of Research and Publications: In process.

Agency: Syracuse University, Maxwell Graduate School of Citizenship and
Public Affairs, Metropolitan Studies, under sponsorship of the
Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. This project will report on several specific
examples of interlocal cooperation and the forms that such cooperation
has taken. From such case studies efforts will be made to generalize
about the different kinds of cooperative action which are possible and
the degree to which they are dependent upon fundamental reforms in
government systems. (AKC)

74. THE EFFECT OF STATE AND FEDERAL GRANTS-IN-AID ON TAX BURDENS WITHIN URBAN AREAS

Main Investigators: Alan K. Campbell and Seymour Sacks.

Status of Research and Publications: In process.

Agency: Syracuse University, Maxwell Graduate School of Citizenship and Public Affairs, Metropolitan Studies, under sponsorship of Brookings Institution.

Previous Digest Report: None.

Research Problem. This project will measure the total tax burdens and the composition, size, and other characteristics of revenue bases of the various jurisdictions in 12 to 15 selected metropolitan areas of the United States. The results of these measurements will be correlated with relevant patterns of local expenditure and state and federal aid in order to evaluate the effectiveness of federal and state grants-in-aid. The two year project will provide guidance to all levels of government on the patterns of fiscal variations among different metropolitan jurisdictions, the extent to which grants-in-aid correct fiscal imbalances, and the policy changes that may be necessary to accomplish appropriate fiscal objectives. (AKC)

75. KENTUCKY RESERVOIR REGIONAL PLAN STUDY

Main Investigator: Linzy D. Albert.

Status of Research and Publications: Study of 18 months duration. Preliminary outline available. Research in process.

Agency: Tennessee State Planning Commission, State Planning Office, in cooperation with other state, local and federal agencies.

Previous Digest Report: None.

Research Problem. Research necessary to develop a comprehensive plan for the physical development of a nine-county region on Kentucky Reservoir.

Method of Study. Cooperatively with various agencies, data and research will be conducted to determine the economic base of the region, the resources, and development trend, such that a framework and plan can be projected approximately 20 years. (LDA)

76. HOMES ASSOCIATION STUDY

Main Investigators: Byron R. Hanke, William C. Loring,
Jan Krasnowiecki.

Status of Research and Publications: Data analysis and report preparation in process. Extensive field work has been completed. Publication is planned in 1963.

Agency: Urban Land Institute, under sponsorship of Federal Housing Administration, National Association of Home Builders, Office of Civil Defense, Public Health Service--HEW, Urban Renewal Administration and Veterans Administration.

Previous Digest Report: None.

Research Problem. Cluster subdivisions and other new approaches to residential land development, it is claimed, can produce better neighborhoods at lower housing costs. These land planning methods often involve parks, swimming pools and other common facilities proposed for private maintenance by homeowners associations. This study seeks to find out what the problems are in creating and operating common properties and homes associations, and how the problems can be avoided or resolved.

The Urban Land Institute is studying existing subdivisions and community developments with common properties maintained by Homes Associations, with attention to: (1) planning the common properties of Associations; (2) setting the legal foundations of Associations and their properties in covenants and other agreements running with the land; (3) organizing, operating and financing Homes Associations; and (4) managing and maintaining the common properties of Associations.

Included in the common facilities being studied are recreation areas, parks, nature preserves, off-street walkways, neighborhood entranceways, buffer plantings, street lighting, garbage-trash collection, storm drainageways and slope erosion-control areas.

From the study, the Institute will publish a manual-like report to help land developers, planners, builders, lenders, realtors, association officers and government officials in determining what common properties and Association operations make for successful residential development and enduring values for homeowners, lenders and communities. (JPP)

77. ECONOMIC AND LAND USE IMPACTS OF TWO ALTERNATIVE LOCAL PROPERTY TAX SYSTEMS IN A METROPOLITAN COUNTY (MILWAUKEE COUNTY, WISCONSIN)

Main Investigator: M. Mason Gaffney.

Status of Research and Publications: Research work began February, 1963; Urban Land Institute Research-Planning Conference held in Washington, D. C., February 28, 1963; completion of manuscript planned by December, 1963.

Agency: Urban Land Institute, under sponsorship of Lincoln Foundation. Research work is being done by Professor Gaffney at the University of Wisconsin-Milwaukee.

Previous Digest Report: None.

Research Problem. To contrast two modes of property taxation as applied to real property: (1) the ad valorem tax as currently administered in Milwaukee County, and (2) a proposed tax on bare site values (land-value tax). The contrasting impacts of these two modes of property taxation upon land uses and the allocation of factor proportions to land will be studied and analyzed.

Previous Relevant Research. This is the first study under Study Question III, "Land Use Impacts of Alternative Forms of Property Taxation" of the Urban Land Institute program reported in Digest 9:2-134.

Hypotheses. Factor proportions will be shifted by a change to land value taxation in the direction of encouraging more intensive use of land. Urban renewal will be accelerated by this shift. Land values of individual parcels will be affected by the tax change, but aggregate land values will not shift materially, and a slight increase in building volume may be expected.

Method of Study. The elaboration of land economic theory as applied to land use economics involved in the change of tax system is basic to the study. In addition, empirical observation relating to the assessing system, and economic factors involved in the taxation of property and of land will be needed to test theory. In the final stages of study, theory, field observation, and case study will be amalgamated to derive conclusions. (JPP)

78. RESOURCES, PEOPLE, AND ECONOMY OF EAST-CENTRAL WYOMING

Main Investigators: Floyd K. Harmston and Richard E. Lund.

Status of Research and Publications: Completed, being reviewed.

Agency: University of Wyoming, Division of Business and Economic Research and Wyoming Natural Resource Board.

Previous Digest Report: 9:1-70; 9:2-144.

Research Problem. This section of Wyoming is dominated by agriculture. The problem is to determine the impact of agriculture, problems created by changes in agricultural techniques, and to determine what the future holds as nearly as possible.

Previous Relevant Research. Nothing of this sort has been done for this area. However, similar analyses have been made of 11 other areas of Wyoming.

Hypothesis. The major hypothesis being tested is: "An economy heavily dependent upon agriculture must, because of automation trends in the industry, find other sources of basic income to keep itself alive."

Method of Study. Aside from usual studies of trends, the methodology being used is analysis by means of multipliers developed with input-output tables.

Major Findings. In 1959 this area received \$53,366,000 in basic income. Agriculturally oriented industries produced 58.9 per cent (agriculture, 36.1 per cent; handlers of farm products, 8.4 per cent; and manufacturing, 14.4 per cent). The state and federal governments provided 23.6 per cent; minerals industries, 6.5 per cent; travelers, 3.4 per cent; and all others, 7.6 per cent.

As a result of this money circulating through the economy, an additional \$86,928,000 of income was produced.

This area is losing population fast, particularly in the more active age groups. This trend will probably continue, in spite of the fact that over-all income will probably remain at about the same level as at present. Additional manufacturing industry utilizing agricultural products would be the best possibility for providing additional employment. (FKH)

79. MARKETS FOR WYOMING INDUSTRIES

Main Investigator: Floyd K. Harmston.

Status of Research and Publications: Preview before printing.

Agency: University of Wyoming, Division of Business and Economic Research, under sponsorship of the Small Business Administration.

Previous Digest Report: None.

Research Problem. To determine where Wyoming industries sell their goods and services, and to make comparisons with immediately surrounding states.

Hypothesis. Wyoming industries tend to sell to rather restricted market areas.

Method of Study. Several sources of data were used in this study. Interstate Commerce Commission one per cent waybill samples for a five year period were used for comparison of Wyoming with surrounding states. Two mailed inquiries, one covering the year 1959 and the other covering 1962, were made to the mining and manufacturing industries. The Wyoming Highway Department collected data on truck shipments. The Wyoming state-federal agricultural statistician and Wyoming Public Service Commissions also furnished data. Regions of the United States used for comparison are those used by the U. S. Department of Commerce.

Major Findings. It can be said, generally, that Wyoming has strong market ties to the Great Lakes, Plains, Rocky Mountains, and Far West areas. Weak ties can be found to the Southwest and and still weaker ones to the Mideast, New England, and Southeast regions. Its distribution pattern is different from any of the surrounding states. It is in some ways more restricted. (FKH)

80. A STUDY OF THE RESOURCES, PEOPLE, AND ECONOMY OF CARBON COUNTY,
WYOMING

Main Investigator: Floyd K. Harmston.

Status of Research and Publications: Published.

Agency: University of Wyoming, Division of Business and Economic
Research, and Wyoming Natural Resource Board.

Previous Digest Report: None.

Research Problem. This study had two objectives. First it is a descriptive study of the area in question. Second it was desired to know what the effect of cyclical changes would be upon economic interrelationships.

Previous Relevant Research. This was the eleventh study of a series of 12 concerning small economies in Wyoming. A study made in Southwestern Wyoming recently tested the effect of a major upheaval in the basic economy.

Hypothesis. The hypothesis being tested was, "Business cycle changes do not cause major changes in the ratios of induced to basic income in a small economy."

Method of Study. Two input-output tables were compiled. One related to the year 1954, which was a particularly slow year in the economy of Carbon County. The other related to 1959, a particularly busy year. Ratio tables were computed, and the endogenous portions of the tables were subtracted from unity matrices and inverted. The ratios were then compared.

Major Findings. Carbon County, Wyoming had a population of 14,937 in 1960, representing a decline of 5.1 per cent from 1950. This was a cyclical rather than a trend proposition, however. A particularly large gain in population occurred between 1940 and 1950. The mobile part of the population was in unattached males.

The economy of the county is heavily dependent upon oil production and refining. Other major industries include livestock production, filling the needs of out-of-county travelers and truckers, transportation, servicing out-of-county shoppers, heavy construction, mining, wholesaling, mineral exploration, and miscellaneous other sources.

While there was some change evident in the two years, for the most part it was minor. In fact the only real change came with a change in the complexion of the construction industry. In

1954 it was dominated by building construction. In 1959 heavy construction dominated.

The conclusion must be that fairly drastic cyclical changes did not cause major changes in the basic to induced income ratios of this particular small economy. (FKH)

81. AN ANALYSIS OF A LOCAL ECONOMY IN A PERIOD OF RAPID TRANSITION

Main Investigator: Richard E. Lund.

Status of Research and Publications: Due from the printers within one month.

Agency: University of Wyoming, Division of Business and Economic Research, under sponsorship of the Small Business Administration.

Previous Digest Report: None.

Research Problem. The area in question is Southwestern Wyoming. The problem is to determine the effect of change upon a small economy that has had a relatively stable economy and is suddenly confronted with loss of a major industry plus the acquisition of other quite different sources of basic income.

Previous Relevant Research. Descriptive analyses were made of this area as of the year previous to the upheaval and as of 1959. Very little has been done in the field of medio-economics. Therefore, this is somewhat of a pioneering work. The theoretical background for this field is very poor.

Hypothesis. The hypothesis being tested here is as follows: "Total economic activity in a local economy has a measurable relationship to basic income to that economy."

Method of Study. Interrelationships were determined by placing information gathered for the year 1953 into an input-output table. Basic income information gathered for 1959 was then used with 1953 ratios to determine what the economy should be like, if no changes occurred in the structure. A 1959 input-output table was utilized to determine how the structure actually looked. By comparing these two sets of data, the areas of major change were easily identified. The various stresses upon small businessmen of this area, caused by these changes, were then analyzed. Changes now on the horizon were also analyzed to determine stresses that will be faced in the years to come.

Major Findings. The hypothesis is true. It is possible to forecast the effect of a major change in the basic structure of a small economy. Hence, a community faced with a loss or gain of a basic income producing industry can determine ahead of time the likely effect of that loss or gain upon its entire economy. This information can then be used to advantage by small businessmen in adjusting their operations to the new situation. The same conclusion holds for the acquisition of new industry. (FKH)

82. A STUDY OF THE RESOURCES, PEOPLE, AND ECONOMY OF SOUTHWESTERN WYOMING

Main Investigator: Richard E. Lund.

Status of Research and Publications: Published.

Agency: University of Wyoming, Division of Business and Economic Research, and Wyoming Natural Resource Board.

Previous Digest Report: None.

Research Problem. This was a non-analytical study of the economy of the region as it existed in 1959 with a projection to 1964.

Previous Relevant Research. A similar study was issued in 1955 concerning the economy as it existed in 1953.

Method of Study. Mostly this is a descriptive study. An input-output table was used to determine the economic relationships in existence. The ratios developed by this method were used in making the projection.

Major Findings. The area is dependent for its basic income upon oil and gas, trona, and other mineral extraction; agriculture; transportation; out-of-area travelers and truckers; and several lesser sources. It contains 38,200 persons. The average hired employee made \$3,883 in 1959. Each dollar of basic income introduced into the economy produced an additional 84.2 cents of business, 6.5 cents of local taxes, 12.4 cents of state and federal taxes, and 58.1 cents of personal income. (FKH)

83. A STUDY OF WYOMING'S OUT-OF-STATE TOURIST MARKET

Main Investigator: Robert F. Gwinner.

Status of Research and Publications: Published.

Agency: University of Wyoming, Division of Business and Economic Research, and Wyoming Travel Commission.

Previous Digest Report: None.

Research Problem. Despite the fact that the travel industry represents an important economic activity in the state, the industry has very little knowledge of the tourist market. Therefore, a study of Wyoming's out-of-state tourist market was conducted in order to provide some relevant information for those who must nurture and promote it.

Previous Relevant Research. Only one other Wyoming travel study has been published. In the summer of 1960, a study was conducted in order to determine the impact of out-of-state highway travelers on the Wyoming economy. No previous attempts had been made to analyze any aspect of the travel industry in Wyoming, and the Division's study accomplished the task of providing a base for further study and analysis. It was, however, limited to a descriptive analysis of Wyoming's "highway travelers."

Hypothesis. Based on the major hypothesis that there is a basic difference between a traveler and a tourist, the study of Wyoming's out-of-state tourist market was designed to analyze those out-of-state parties with an expressed recreational interest in Wyoming.

Method of Study. The universe for study was taken from the files of the Wyoming Travel Commission. It was assumed that a travel party with an expressed interest in Wyoming could be defined as one that took the trouble to inquire about the state before embarking upon a trip that included Wyoming.

The analysis was based on the results of a mail survey of 2,000 potential travel parties that wrote to the Wyoming Travel Commission during the first half of 1961. Randomly selected, those parties were considered representative of the larger universe of out-of-state travel parties with an expressed interest in the state of Wyoming. A 40.5 per cent return provided enough relevant data to analyze the market according to several main criteria that are standard procedure in travel research studies.

Major Findings. Although Wyoming's "potential" tourist market exceeds 1.5 million out-of-state travel parties, only a small percentage of these parties can be classified as Wyoming tourists. The larger percentage is characterized by the typical "hurry-through" traveler in search of the "other side of the state." As a result, Wyoming's travel industry is largely underdeveloped in terms of a qualified tourist market.

Unfortunately, Wyoming is overshadowed by two dominant attractions. Both Yellowstone and Teton National Parks represent Wyoming for a large segment of the state's tourists. These people take a direct route to the parks, spend several days there, and then depart by the most direct route. Consequently, a large number of Wyoming tourists only see a small part of the state. Thus, this enviable drawing power of the parks contributes very little to the development of the state's industry and may even be harming it. (FKH)

BRIEF MENTION

NEW URBAN AND REGIONAL RESEARCH AND TRAINING PROGRAMS

Graduate Program in Urban Affairs, University of Wisconsin-Milwaukee

The University of Wisconsin-Milwaukee has established a new graduate Department of Urban Affairs in its College of Letters and Science. The program leads to a Master's Degree in Urban Affairs. The curriculum is designed to provide an integrated and balanced offering of courses in urban affairs, an investigation of methodological approaches to urban research and a proficiency in an occupational specialty in urban affairs. Further information may be obtained from Henry Schmandt, Chairman, Department of Urban Affairs, University of Wisconsin-Milwaukee, Milwaukee 11, Wisconsin.

Planning Program - University of Cincinnati (a)

The University of Cincinnati has initiated a two year program leading to the degree of Master in Community Planning. The program involves the participation of the College of Arts and Sciences; Business Administration; Design, Architecture, and Art; Engineering; Medicine; and the Evening College. It offers a core of courses on planning theory, planning survey and analysis, planning forward programming, land use and facility planning, and planning implementation. A student may elect to concentrate further in specialized aspects of one or a combination of these core areas, or in one of eight specialized disciplines: social service planning; environmental health planning; community organization planning; administrative planning; economic development planning; planning engineering; physical environmental design; and general community planning. A limited number of graduate fellowships and student assistantships are available.

The Department of Geography and Regional Planning of the University of Cincinnati also offers A.B., M.A. and Ph.D. degrees in Regional Planning. Details may be obtained from Dr. Robert C. Hoover, Professor of Planning, University of Cincinnati, Cincinnati 21.

Protestant Urban Training Center (b)

Protestant groups have established the first nationally sponsored interdenominational urban problems training center for

(a) From ASPO Newsletter, April, 1963.

(b) From Journal of Housing, January, 1963.

clergy and layman. Known as the Urban Training Center, the non-profit corporation is located in Chicago and offers courses and on-the-job training to foster better understanding of urbanism and its implications for the Church. Information on planning and urban renewal is part of the curriculum.

U. S. Public Health Service

A two-week training course, "Urban Planning for Environmental Health" sponsored by the U. S. Public Health Service in cooperation with the Kentucky State Department of Health and the Lexington Fayette County Health Department was given in Lexington, Kentucky, April 1-12. The training course is the most recent of a series of nine given in various parts of the country under Public Health Service auspices.

Norman E. Tucker, chief of Metropolitan Planning and Development Training, at the Public Health Service's Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio, said that the objectives of this training course were to facilitate cooperation between planning and health officials; to examine environmental problems in communities; to increase public awareness of the problem; and to promote inter-governmental cooperation in the planning area.

The course was designed for health and planning personnel, public officials, and lay citizens interested in planning a more healthful community environment. A considerable portion of time was devoted to the initiation and preparation of an environmental health survey of the City of Lexington, including proposed recommendations. This was to be followed by a suggested program for implementation of the recommendations.

It is anticipated that participants will undertake environmental health surveys within their own areas using as a model a planning manual published by PHS, the "Environmental Health Planning Guide." (See below) Staff members of the State Health Department and the Public Health Service regional office in Charlottesville, Virginia will provide some technical assistance where needed.

RESEARCH MATERIALS

Consumer Expenditures and Income Reports

The Bureau of Labor Statistics, U. S. Department of Labor has announced the publication of Consumer Expenditures and Income, Boston, Massachusetts, 1960. The 12 page detailed report compares average family income, expenditures, and savings in Boston for 1960 with those of a similar survey made in 1950. The report shows

average family income before and after taxes and relates this data to current living expenses. Individual tables of income and expenditures are presented by breakdowns of income class, family size, age and occupation of family head and tenure of family.

Similar reports are available for New York, Chicago, Detroit, San Francisco, Washington, D. C. and Atlanta. The reports are free and can be obtained by writing to Mr. Wendell D. MacDonald, Regional Director, U. S. Department of Labor, Bureau of Labor Statistics, 18 Oliver Street, Boston 10, Massachusetts.

Revised Projection of United States Labor Force (c)

A report presenting revised projections of the U. S. labor force to 1975 was recently issued by the Bureau of Labor Statistics. The new figures are interim revisions of projections made several years ago based on data through early 1957. The present projections take account of recently revised population projections of the Bureau of the Census and of labor force information accumulated since 1957 which indicated that some of the previously projected trends in labor force participation rates needed to be modified.

In the present set of labor force projections, as in the earlier projections, it was assumed that the economy will operate at relatively high levels of activity, that there will be no significant change in size of the armed forces, and that past trends in labor force participation rates for various age groups of men and women will continue into the future.

The new projections of the labor force are somewhat lower than the earlier projections, chiefly because of greater declines than previously anticipated in labor force participation rates of young men and men aged 65 years and over. A discussion of the methodology and the changes appear in Special Labor Force Report No. 24, "Interim Revised Projections of U. S. Labor Force, 1965-75." Copies are available upon request to the Division of Manpower and Employment Statistics, Bureau of Labor Statistics, Department of Labor, Washington 25, D. C.

1962 County and City Data Book (d)

The 1962 edition of the County and City Data Book, issued by the Bureau of the Census, is a convenient one-volume summary primarily

(c) Statistical Reporter, November, 1962.

(d) Statistical Reporter, November, 1962.

emphasizing data for all counties and for all cities of 25,000 inhabitants or more. It presents a selection of statistics from the latest censuses of population, housing, agriculture, retail, wholesale, and service trades, manufactures, mineral industries, and governments. It also includes statistics from a variety of other sources on births, deaths, and marriages, bank deposits, electric bills, hospitals, and climate. In addition to those for counties and cities, statistics are shown for each state, division, region, standard metropolitan statistical area (SMSA), urbanized area, and unincorporated place of 25,000 inhabitants or more.

The County and City Data Book also contains maps for each state, showing counties, SMSA's, and all cities of 25,000 inhabitants or more; explanatory notes; source citations; and a special appendix giving the population and land area of all urban places.

As a byproduct of the method of preparing the Data Book, the Census Bureau has available in the form of punchcards and electronic computer tapes all of the statistics presented in the book. Cost of reproduction of the entire set of punchcards (approximately 82,000 cards) is \$850. Cost of complete computer tapes (Univac or IBM systems) is \$600. Selections of items for specified areas may also be purchased at cost either on punchcards or on tape.

The County and City Data Book (705 pp., \$5.25 per copy) may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

A pamphlet, "Contents of the County and City Data Book, 1962," which presents the column headings for all of the tables in the book and explains the procedure for ordering punchcards or computer tapes containing the data may be obtained free of charge upon request by writing to the Publications Distribution Section, Bureau of the Census, Washington 25, D. C.

Components of Population Change for Counties and SMSA's (e)

The Bureau of the Census has released a report containing estimates of births, deaths, and net migration for the 1950 to 1960 decade for counties, standard metropolitan statistical areas (SMSA's), state economic areas, and economic subregions. This is the first full compilation of the components of population change ever published for counties.

(e) Statistical Reporter, December, 1962.

Components of change for the total resident (census) population are generally featured in the report, but net civilian migration is presented in addition to net total migration for all counties. With the presentation of detailed data for counties, the user has the opportunity to assemble components of change for any areal unit which can be delimited in terms of counties.

The text of the report includes a review of major regional and metropolitan trends in migration during the 1950's. Summary tables feature components of population change by metropolitan status for regions and geographic divisions, the relationship of migration change to per cent urban in 1960 for nonmetropolitan counties, and the counties and SMSA's with the largest numerical in-migration and the highest rate of in-migration during the 1950 to 1960 decade.

The report also includes estimates of net total migration for 1940 to 1950 for the SMSA's, state economic areas, and economic subregions based on the series published by Donald J. Bogue in "Components of Population Change, 1940-50" so that some historical perspective is provided.

Copies of this report (Current Population Reports, Series P-23, No. 7) "Components of Population Change, 1950 to 1960, for Counties, Standard Metropolitan Statistical Areas, State Economic Areas, and Economic Subregions," (92 pages, \$1.00 per copy) may be purchased from the Bureau of the Census, Washington 25, D. C.

New Reports on 1962 Census of Governments (f)

The publication of three additional preliminary reports of the 1962 Census of Governments has been announced by the Bureau of the Census. These reports are:

Assessed Values for Property Taxation (Preliminary Report No. 5)--presents data by state and county on assessed valuations of property subject to local general property taxation. (Related information on the valuation level of real estate assessments is being developed from a nationwide sample of realty sales that occurred during the latter half of 1961 and will be included in a report scheduled for publication in mid-1963).

Governmental Units in 1962 (Preliminary Report No. 6)--furnishes summary state-by-state data on local governments and public school systems. (Detailed data on governmental units will be issued in Volume I of the final reports of the census, which is scheduled for publication early in 1963.)

(f) Statistical Reporter, December, 1962.

Long-Term Debt of State and Local Governments (Preliminary Report No. 7)--presents estimated nationwide debt totals as of June 30, 1962, with distributions by purpose of issue and by scheduled maturity periods.

The preliminary reports of the Census of Governments may be purchased (No. 5, \$1.00; No. 6, 10¢; and No. 7, 10¢) from the Bureau of the Census, Washington 25, D. C.

Reports on Changes in Housing, 1957-1959 (g)

With the publication in November of the report on Inventory Characteristics for the United States and regions, the Bureau of the Census completed the release of Parts 1A and 1B of Volume IV, Components of Change, of the 1960 Census of Housing (SR No. 289, Jan. '62, p. 5). The most recent US report (Part 1B-1) presents statistics on the characteristics of present and previous residence of recent movers and characteristics of selected components of change for the 1950-1959 period. The US report presenting the basic counts and characteristics of the 1950-1959 components of change (Part 1A-1) was released in October.

The first two reports of Part 2, "1957 to 1959 Components," covering the Los Angeles-Long Beach and the New York-Northeastern New Jersey metropolitan areas are scheduled for release in late December. Part 2 reports will include a separate report for the United States, by regions, and for each of nine selected metropolitan areas--the same areas for which separate data were published in the December 1956 National Housing inventory. These reports will present data on changes in the inventory since December 1956, i.e., sources of the 1959 inventory and disposition of the 1956 inventory in terms of such changes as new construction, conversions, mergers, demolitions, and other additions and other losses.

Characteristics will be shown for the units involved in each type of change and also for units which were the same. In addition, for units that were the same in 1956 and 1959, the 1959 characteristics are cross-tabulated by 1956 characteristics for tenure and color of head of household, condition and plumbing facilities, gross rent, and value. For new construction units, rooms, value and gross rent data are cross-tabulated by selected items.

Copies of Volume IV, Series HC(4) reports, may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. (individual area reports for Parts 1A and 1B are 30 cents and the US summaries \$1.00; individual area reports for Part 2 are 40 cents, and the US summary is \$1.50).

(g) Statistical Reporter, December, 1960.

Directory of Federal Statistics for Metropolitan Areas (h)

The Advisory Commission on Intergovernmental Relations has issued a "Directory of Federal Statistics for Metropolitan Areas." This Directory has been prepared as a reference document for use in identifying the metropolitan area statistics published on a regular basis by the Federal Government. The information is shown in tabular index form, by major and detailed subject, under the following general headings: agriculture; commerce, trade, and finance; construction; education; government; health and vital statistics; housing; income and earnings; labor and employment; law enforcement; manufacturing and mining; population; prices; transportation and communication; and weather.

For each statistical series, the tables identify the date of origin, source publication, and geographic coverage reported: Standard metropolitan statistical area, urbanized area, county, city, urban place, minor civil division, Census tract or city block.

Copies of the "Directory of Federal Statistics for Metropolitan Areas" may be purchased (118 pages, \$1.00) from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Data on 1961 Income of Families and Individuals (i)

"Income of Families and Persons in the United States, 1961," was issued recently by the Bureau of the Census. This report, the latest in the P-60 series, presents data on income for families, unrelated individuals, and persons 14 years old and over and is based on information collected in the February and March 1962 Current Population Surveys.

The 42 detailed tables include national figures for 1961 for: (1) families and unrelated individuals by total money income, by farm-nonfarm residence, type of family, age of head, size of family, number of earners, work experience of head, reason for head working part year or not working, region, and color; (2) families by total money income, by number of related children under 18, occupation of head, industry of head, and source of income; and (3) persons 14 years old and over by total money income, by sex, by a group of characteristics similar to those listed above.

(h) Statistical Reporter, January, 1963.

(i) Statistical Reporter, February, 1963.

An introductory text summarizes the effect of price changes and other economic developments on family income. In addition, data on income in 1961 of families and persons by years of school completed, cross-classified by age and color are shown in four detailed tables and analyzed in the text.

Census Data on Residential Finance for Homeowner Properties (j)

Residential Finance--Homeowner Properties was published recently by the Bureau of the Census as Part 1 of Volume V of the 1960 Census of Housing. Data are presented for the United States (total and inside all Standard Metropolitan Statistical Areas), the four Census regions, and 15 SMSA's and two standard consolidated areas. Copies of this publication (416 pages, \$4.00) may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Detailed distributions are presented for property and owner characteristics of both nonmortgaged and mortgaged properties with one dwelling unit. These characteristics include value, family income, housing expense, housing expense as a per cent of income, year structure built and year acquired, and manner of acquisition.

For mortgaged properties with one dwelling unit, characteristics of the mortgage, property, and owner are shown by government insurance status of the first mortgage in terms of number of properties and amount of outstanding mortgage debt. Among the characteristics shown for mortgaged properties are amounts of loan, debt, and principal and interest payments, type of holder, interest rate, term, and location of holder in relation to property. A number of ratios, such as debt as a per cent of value, are also shown.

Selected characteristics are also shown by type of first mortgage holder. Summary data are shown for homeowner properties with one- to four-dwelling units.

Present plans call for the publication at a later date of a supplement to Part 1 of Volume V which will present selected property, owner, and mortgage characteristics for properties occupied by nonwhite owners. Part 2 of Volume V, scheduled for publication in May, will present data for rental and vacant properties, for the United States, by size of property. Subjects covered are similar to those in Part 1.

(j) Statistical Reporter, February, 1963.

New IASI Publication on the Demographic Structure of American Countries (k)

The Inter American Statistical Institute has recently published an analytical study by the Brazilian demographer Giorgio Mortara entitled "Características da Estrutura Demografica dos Países Americanos (Characteristics of Demographic Structure of American Countries)." This analysis of the results of the censuses taken by the American nations under the Program of the 1950 Census of the Americas presents an extensive series of tables and accompanying texts, both of an informative and an interpretive nature, designed to furnish detailed insight into the principal characteristics of the population and their varied relationships. The original Portuguese version is to be followed by a Spanish and an English edition. The Institute's objective in offering this comprehensive statistical picture of the demographic structure of the American countries to the public is to contribute to the background of information so urgently needed at the present time as a basis for social and economic planning.

The material is presented in six sections corresponding to the following main topics: (1) the population and its geographical distribution; (2) demographic-biological characteristics, sex and age; (3) demographic-political characteristics, national origin and nationality; (4) demographic-social characteristics, marital status and family structure; (5) demographic-cultural characteristics, literacy and level of education; (6) demographic-economic characteristics, economic activity, industry and occupation. Professor Mortara opens each section with analytical comments placing the subject in a general perspective and directing attention to specific findings based upon the tabular presentations that follow. A final section of the study presents some of the author's conclusions.

Copies of this publication are available upon request from the Inter American Statistical Institute, Pan American Union, Washington 6, D. C.

RESEARCH PROGRAMS

Metropolitan Area Income Project

The Office of Business Economics, U. S. Department of Commerce, has commenced work on measuring the personal income flow in Standard Metropolitan Statistical Areas in the United States. When completed there will be available a detailed picture of the personal income structure of each area by type of income and by industrial source of income. The project was begun last fall and is well under way but a completion date has not yet been determined.

(k) Statistical Reporter, February, 1963.

Housing and Home Finance Agency Research Program

HHFA - Census Research Program. Additional information has been received on the HHFA - Census Research Program. The project entitled "Sales Volume and Sales Prices of New Homes" is being continued and several quarterly reports, Census-HHFA C-25 series have been published. Tabulations for project No. 2, "Study of Mortgage Foreclosures" have been completed and are now undergoing analysis and evaluation. A report on project No. 3, "Special Census Data on Housing Conditions of the Elderly," has been published by the Bureau of the Census as Volume VII of the United States Census of Housing, 1960 entitled Housing of Senior Citizens. Project No. 4, "Improved Techniques for Estimating Family Displacements," has been completed and findings are being evaluated.

Housing Study. The HHFA has also begun a study on the "Construction and Financing of Habitable but Incomplete Homes." The purpose of this study is to determine whether the habitable but incomplete (shell) homes which have been purchased in recent years and the financing terms used are providing completed homes of a satisfactory housing quality within the financial means of homeowners in rural and outlying areas. The study involves interviews with a sample of recent purchasers of the habitable but incomplete homes. Findings, evaluations and conclusions will be incorporated in a final report.

Low Income Housing Demonstration Program. The HHFA has published a new program guide, "Low-Income Housing Demonstration Program," which explains the \$5 million federal program authorized by the 1961 Housing Act to provide assistance in the development and demonstration of new and improved means for making available better housing for low-income persons and families. Demonstration grants, to public or private agencies may be made by HHFA to test methods of design, construction, conversion, rehabilitation, or financing of such housing. Copies of the guide are available from HHFA Regional Offices or from the HHFA, Washington 25, D. C.

Mass Transportation Demonstration Studies. Information has also been received from the HHFA concerning the progress of several mass transportation demonstration projects. The Urban Mass Transportation Grant Program was authorized in the Housing Act of 1961. Demonstration grants may be made for projects designed to contribute to the improvement of mass transportation or to reduce the need for it. A federal grant of up to two-thirds of the cost may be made for demonstration projects. The following projects have been reported:

- (1) Analysis of the Seattle Monorail Operation. This study, conducted by the University of Washington

is now completed and is available from HHFA. The investigation showed that the Seattle monorail was somewhat superior to a modern railway in vibration characteristics; noise levels, both inside and outside the trains, were about the same as those of a bus; the four-foot columns supporting the tracks did not increase the accident rate on the street; and there was overwhelming public acceptance of the monorail by riders.

- (2) Study of Effect Upon Bus Ridership of a Substantial Service Increase. This study has been completed and is available from the Detroit Department of Street Railways. The results of the study show that better bus service resulted in an increase of more than 12 per cent in the number of passengers who rode buses during the eight-week project period. Doubling the number of buses did not have an adverse effect on the flow of other traffic using the same streets.
- (3) Effect of Full Scale Transit Service in New Suburban Areas. This study, being conducted by the Memphis Transit Authority, was initiated in January, 1963, and will be completed in June, 1965. The project involves new or increased service in three rapidly developing suburban areas. Data will be collected to determine whether this increased service increases transit volume.
- (4) Use of Small Buses in the CBD. This study is being conducted by the District of Columbia Government with the assistance of the Washington Metro Area Transit Commission, D. C. Transit System, Inc., and Downtown Progress. The study will test whether small buses, seating 12 to 18 passengers, circulating in the downtown business center on a frequent-service schedule with a five-cent fare, will attract enough riders to effectively facilitate the movement of people, reduce traffic congestion, and stimulate business activity.
- (5) Study of a Park-and-Ride Station Outside the CBD. This study, conducted by the New York Superintendent of Public Works with the assistance of the Tri-State Transportation Committee, will be initiated in April, 1963, and completed in 1965. The study seeks to determine if a convenient park-and-ride station outside the CBD will attract new patrons to rail service and divert passengers from the existing city-center station.

- (6) Testing Automatic Fare Collection and Ticket Validation. Agency is the New York Superintendent of Public Works, assisted by the Tri-State Transportation Committee. Project involves the installation of equipment at two suburban railroad stations and the analysis of the effectiveness of the equipment.
- (7) Study of Effects of Service Improvements and Fare Reductions. Agency is the Massachusetts Mass Transportation Agency. The project involves new and increased service and fare experiments in the Boston metropolitan area and in the urban areas of Fitchburg, Worcester, and Pittsfield. Two railroads, the Metropolitan Transit Authority, and a number of bus carriers are participating.
- (8) Study of Effect of High Quality Commuter Railroad Service. Agency is the Southeastern Pennsylvania Transportation Compact (SEPACT). Project involves studying the effects of increased and improved train service, lower fares, better parking facilities at suburban stations, and feeder-bus services on two separate, but mutually supporting, rail commuter lines.

BIBLIOGRAPHIES

New Exchange Bibliographies; Council of Planning Librarians

The Council of Planning Librarians has announced the publication of the following bibliographies in its regular series.

- No. 23. CENTRAL BUSINESS DISTRICTS. By Mary Vance, Librarian, Department of City Planning and Landscape Architecture, University of Illinois. January, 1963. 116 p. \$3.00. Combines material formerly found in Nos. 12 and 16 and brings it up to date through September, 1962.
- No. 24. SELECTED BIBLIOGRAPHY ON PLANNING, POLITICS, AND POLITICAL SCIENCE. By Charles E. Patterson, Jr., Department of History and Government, Lehigh University. February, 1963. 17 p. \$1.00. Subscriptions to the regular bibliography series may be ordered singly or any number may be used to begin a subscription of ten consecutive bibliographies for \$8.00. A student rate of ten consecutive bibliographies for \$5.00 is also available.

Latin American Series

Bibliography number four has been issued in the Latin American series.

- No. 4. URBAN PLANNING IN COLOMBIA. By Francis Violich. December, 1962. 11 p. \$1.00. Annotated. This series is not included on regular subscriptions. Individual issues in English at \$1.00 each may be ordered from the Council (see address above), or a subscription for all issues may be placed at a cost of \$5.00. Spanish editions are available without charge from Latin American Urban Planning Research, Room 203, City and Regional Planning Building, University of California, Berkeley 4, California.

Eastern European Series

The Council of Planning Librarians has also announced a new series of Exchange Bibliographies on urban planning in Eastern Europe. The six bibliographies in this set are being compiled under the direction of Dr. Jack C. Fisher, Department of City and Regional Planning, College of Architecture, Cornell University.

The following titles are included in the series and will be issued periodically over about a year's time.

- No. 1. AN ANNOTATED BIBLIOGRAPHY OF SOVIET URBAN AND REGIONAL PLANNING AND LOCAL ADMINISTRATION (Western Language Sources)
- No. 2. BIBLIOGRAPHY OF SOVIET URBAN AND REGIONAL PLANNING AND ADMINISTRATION (Russian Language Sources)
- No. 3. BIBLIOGRAPHY OF POLISH PHYSICAL PLANNING.
- No. 4. BIBLIOGRAPHY OF POLISH URBANIZATION AND URBAN GEOGRAPHY
- No. 5. BIBLIOGRAPHY OF YUGOSLAV PHYSICAL PLANNING
- No. 6. BIBLIOGRAPHY OF YUGOSLAV URBANIZATION AND URBAN GEOGRAPHY

This is a special series not included in regular Exchange Bibliography subscriptions. Subscriptions may be ordered at a cost of \$8.00 for the set, or bibliographies may be ordered individually at \$1.50 each.

All orders, with accompanying check or money order, should be sent to Exchange Bibliographies, Council of Planning Librarians, 6318 Thornhill, Oakland 11, California.

Planning Libraries Depository Service

The Council of Planning Librarians has announced a new depository and distribution service. Several planning libraries will act as depository and distribution centers for planning publications that planning offices or individuals may wish to discard. The available publications will be listed on duplicate exchange lists circulated among planning libraries. The system should be especially useful in helping new planning libraries build up their collections. For further information about the service, write to:

Melva J. Dwyer, Secretary
Council of Planning Librarians
Fine Arts Room, The Library
University of British Columbia
Vancouver 8, British Columbia, Canada

Bibliography on Planning Films (1)

ASPO has published a revised edition of its bibliography, Motion Picture Films on Planning, Housing and Related Subjects, a listing of more than 60 films with information on the subject matter covered as well as where and how they may be rented. The purchase price is \$1.00 for ASPO members; \$1.50 for nonmembers. Write to ASPO, 1313 E. 60th St., Chicago 37, Illinois.

Urban Real Estate Research

The Urban Land Institute has published Research Monograph No. 8, Urban Real Estate Research: 1961. This continues the yearly inventory of urban real estate research begun in 1959 and covering the period 1946 through 1961. Research monograph No. 8 was edited by Jerome P. Pickard and Arlene G. Balahan. The work reviews real estate research completed or in progress and includes 335 short abstracts of studies and publications related to real estate. Copies of the monograph may be obtained from the Urban Land Institute, 1200 18th Street, N. W., Washington 6, D. C.

(1) From ASPO Newsletter, February, 1963.

AIA Urban Design Project

The American Institute of Architects has established an urban design committee to study and encourage better urban design. The committee is now engaged in the following activities:

Publication of a 12-article series on urban design, to be published every other month in the AIA Journal. The subject is "Urban Design: The Architecture of Towns and Cities." The first article was published in the December, 1962, AIA Journal.

Preparation for a series of seminar meetings for AIA members at a regional level. These were started in March and will be held as requested thereafter.

Liaison work with government and other related professional agencies in matters of urban design.

AIP - 1967 Commemoration Program

The American Institute of Planners intends to observe its 50th year of activity (1967) with a special program of meetings and publications. Planning for the 1967 program is still in an early stage but two committees, Research and Publications, have been established. The present thinking is that the Commemoration should develop material that can be used both for public and internal education. The Commemoration Committee is considering the publication of monographs of pioneers in the planning profession. These would take the form of biographical sketches showing in what way these selected individuals have contributed to the development of planning in the United States. Similar to the monographs, but more intensive and of wider range, would be the publication of a history of the AIP. More complete details on the program will be announced later.

UN Committee on Housing, Building and Planning (m)

A new United Nations Committee on Housing, Building and Planning recently held its first meeting. Twenty-one nations were elected to the Committee by the UN Economic and Social Council: Argentina, Canada, Chile, Colombia, Costa Rica, Denmark, France, Greece, Hungary, Indonesia, Iran, Israel, Italy, Japan, Madagascar, Nigeria, Romania, Tanganyika, the U.S.S.R., the U.A.R., and the U.S.A. The United States was represented by William L. C. Wheaton professor of city planning at the University of Pennsylvania.

(m) From ASPO Newsletter, April, 1963.

The Committee stressed the growing importance of housing, building and planning in the face of the increasing rate of urbanization in developing countries. It urged an increased allocation of international resources to the solution of these problems, emphasizing the necessity for trained personnel in the developing countries and the establishment of the institutions for building, saving, mortgage-lending, and the planning and regulation of urban development. The Committee also urged an expansion of pilot and demonstration projects in the developing countries as a means for showing their citizens and governments how housing activities might be expanded.

Other recommendations were for the establishment of regional research, training and educational institutions in each of the major developing regions of the world and the coordination of housing, building, and planning activities with economic development through the regional economic commissions and through the use of the UN Secretariat as a coordinating agency. Finally, the Committee urged an expansion of international lending for housing, the provision of community facilities--particularly sewer and water systems--and the development of building industries. It stressed, however, that massive international lending for these activities would create serious balance of payments problems for the borrowing nations.

Representatives of International Labor Organization, the Food and Agriculture Organization, the United Nations Educational, Scientific and Cultural Organization, the International Bank, and the World Health Organization were present and, in addition, representatives of the International Federation for Housing and Planning, the Inter-American Planning Society, and the International Union of Local Authorities. Other nongovernmental organizations represented were the International Institute of Administrative Sciences, the International Cooperative Alliance, and trade union and religious groups.

The full U. S. Mission consisted of Dr. Wheaton, Mr. Roy Burroughs, HHFA, and Messrs. Leighton Van Nort, Herman Kleine, and John Means, State Department. The next meeting of the Committee will be held in January, 1964.

Environmental Health Planning Guide

This government publication, covering air pollution, sewerage, water, housing, refuse, and radiological health, is designed for use by community groups, by health officials, and by city planners. It provides information on how to evaluate health related services and facilities in the community from a planning standpoint. Its use should provide the community with a better view of the factors contributing to a healthful environment now and in the future. It can be obtained from the Superintendent of Documents, of the Government Printing Office in Washington, D. C., at 45 cents per copy.

AVAILABLE BACK ISSUES OF RESEARCH DIGEST

A few copies of the following back issues of the Research Digest are still available, and may be purchased at the regular price of \$1.00 per copy.

Vol. 3	No. 2	November, 1956
Vol. 5	No. 2	November, 1958
Vol. 7	No. 2	November, 1960
Vol. 8	No. 2	November, 1961
Vol. 9	No. 1	April, 1962
Vol. 9	No. 2	November, 1962

A few copies of the Index to Volume 8 are also available. One copy free to subscribers. Extra copies \$1.00 each.

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UNIVERSITY OF ILLINOIS

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Editor's Notes

Two changes are noted above in the staff responsible for getting out the Digest. Mrs. Marie Broadrick, former business manager, is now employed elsewhere in the University of Illinois, and has been replaced by Mrs. Brenda Nolan, while John Fondersmith, editorial assistant for the past two years, is now working as a planner with the Peace Corps in Lima, Peru, and has been replaced by George Crain, a new graduate assistant at the Bureau of Community Planning. Also, it should be noted that beginning with this issue, the subscription rate of the Digest becomes \$4.00 per year for individuals and \$6.00 for organizations, a necessity which we are pleased to note most readers are accepting by their prompt renewals.

The Index to Volume 9 is being enclosed with this issue. (SK)

Founded in 1954 by an informal organization known as the Urban Planning Research Group, the Research Digest is prepared and distributed semi-annually in April and November, by the Bureau of Community Planning of the University of Illinois. Its objective is to serve as a medium of communication among individuals and groups engaged in urban and regional research. Abstracts are invited covering research projects recently initiated, projects well underway on which significant progress or findings can be reported, and projects recently completed. Brief notes on items of interest to researchers in this field are also desired, as are special articles in keeping with the character of the publication. Subscription is \$4.00 per year for individuals and \$6.00 for organizations. Address all communications to Research Digest, Bureau of Community Planning, University of Illinois, 1202 West California Avenue, Urbana, Illinois

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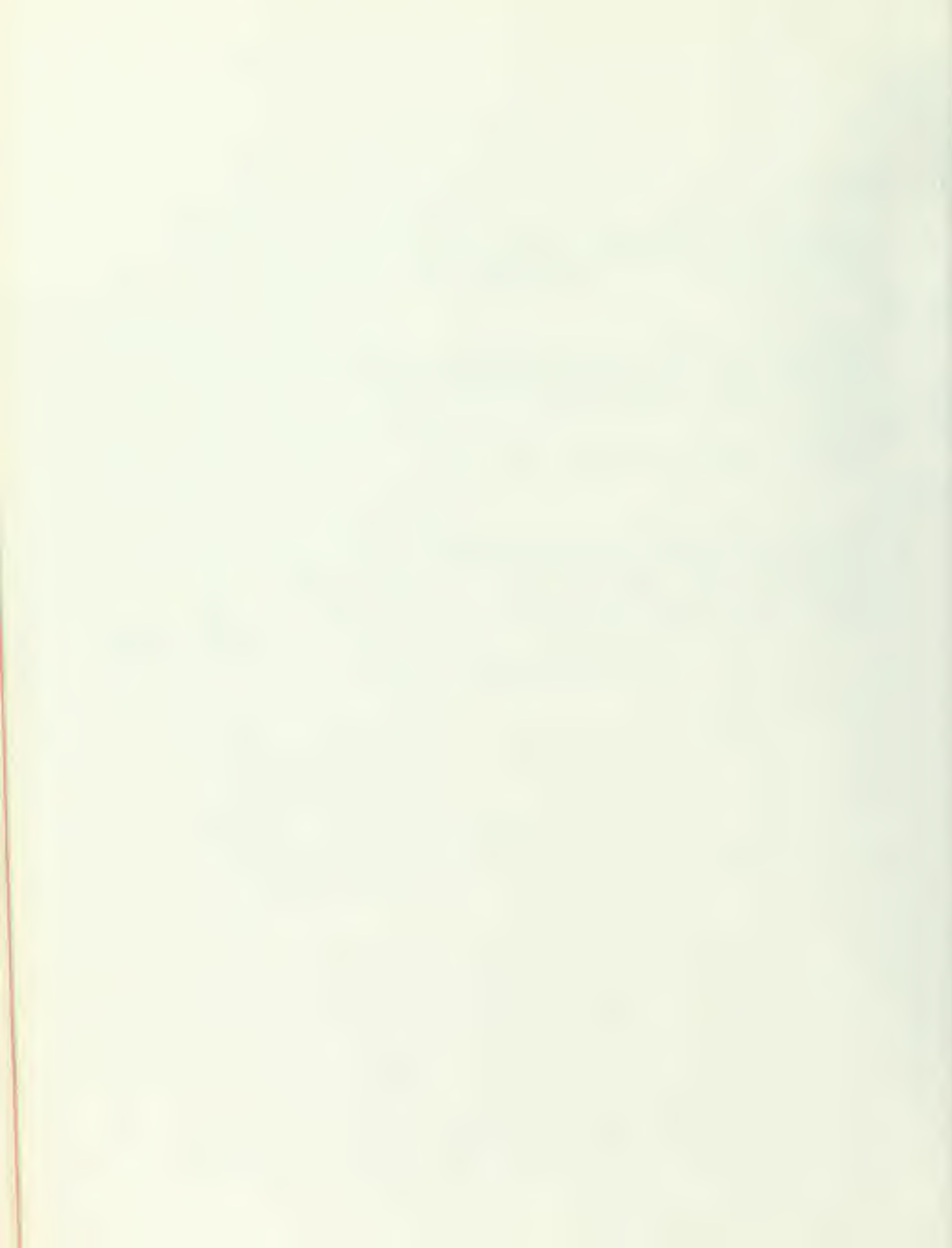
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1. STATE AID FOR EDUCATION IN NEW ENGLAND

Main Investigators: George A. Bishop and Mary Ann Hunter.

Status of Research and Publications: Completed Article published in the Boston Federal Reserve Bank's New England Business Review, September, 1963. An additional statistical supplement with notes, tables, and sources is available.

Agency: Federal Reserve Bank of Boston.

Previous Digest Report: None.

Research Problem. What are the effects of state aid for current education purposes in New England? Does it equalize opportunities for good schooling in both rich and poor communities? Does state aid function as a substitute for local property taxes? Or does it stimulate additional spending for improved school programs by local authorities?

Previous Relevant Research. Such problems for the New York area have been examined in The State and Local Government...The Role of State Aid by S. Sacks, R. Harris, and J. Carroll, Comptroller's Studies in Local Finance No. 3, 1963. A study by Jerry Miner, Social and Economic Factors in Spending for Public Education, covers about a thousand school districts in 21 states.

Hypotheses. Local tax resources are the major determinants of the amounts spent on public schools. Where local tax resources are low, state aid can equalize opportunities by financing good schooling without resort to added local taxes. A second goal of state aid is to reduce the local property tax burden. A third goal--but one that conflicts with the second--is to stimulate spending for improved education.

Method of Study. Multiple correlation analysis was used to determine the effects of state aid. The analysis covered 1,400 towns and cities in New England. For the year 1961-62 the analysis determined the correlation between expenditures per pupil and the major factors presumably affecting expenditures: state aid per pupil, equalized property valuation per pupil, and the size of school membership.

Major Findings. In New England state aid for schools is substantially less than the national average of state grants for education. This aid has been more effective in stimulating spending on education in smaller places than in metropolitan areas. In general, however, its effect has largely been to substitute for added property taxes.

In most states revised formulas for "foundation" aid and current equalized property values are needed to reduce existing inequities.

Massachusetts has the most obsolete formula and still uses 1945 valuations to determine local ability to pay for schools. Data for 1961 show no significant relationship between per pupil state foundation aid and current valuations in Massachusetts. (RBN)

2. CAPITAL EXPORTS AND GROWTH AMONG U. S. REGIONS

Main Investigator: J. T. Romans.

Status of Research and Publications: Completed and submitted as doctoral dissertation.

Agency: Brown University, Department of Economics.

Previous Digest Report: None.

Research Problem. Major objectives of study were (1) to develop estimates of gross state income and product for states, including estimates of transmission of capital between states, and (2) to determine extent to which differentials in state and regional growth rates are explained by pattern of net interstate and interregional capital flows.

Method of Study. Basic approach was to distribute to each state that portion of each component of the gross national income and product accounts for which it was responsible. For some components, state data were available; for others, proxy variables were used to allocate the national totals to states. The result was a single entry accounting system of gross income and product by states. Although largely without internal checks or balances, it follows the logic of the national income accounts. Allocating national accounting figures in this manner allowed state figures for consumption, gross saving, and net taxes to be estimated and summed to yield estimates of gross state income. Summing state consumption, gross investment, and government purchases of goods and services yielded estimates of domestic spending or domestic absorption by states. Net exports on current account, or net "foreign" investment, was the most commonly used measure of capital flows in this study, and was computed as a residual by deducting this domestic absorption from gross state income. The computations were carried out for two cycle peak years, 1953 and 1957.

Hypotheses. That regional growth rates are a function of net "foreign" disinvestment, i.e. that regional economic growth is to a large degree dependent upon the net importation of capital from other (slower growing) regions. Also, that transmission of capital between states should tend to bring about a convergence of state income differentials as high income states export capital to low income states. Such a flow of capital from high to low income states could take place either because of a lower rate of return on investment in high wage (and, thus,

high income) areas or because a surplus of saving is generated in high income states as a result of the geographic concentration of wealth owners (the property income receivers) in these states.

Major Findings. A very significant portion of the per capita or per worker income differentials between states was due to the size of the property income share of personal income. The property income share also largely determined each state's position as a net exporter or net importer. There was also strong evidence of convergence of per capita incomes between 1929 and 1959, as well as a strong positive relation between net imports and growth. An appreciable portion of the growth of the faster growing states appeared to be financed through the importation of capital from the slower growing states. (JTR)

3. HOSPITAL UTILIZATION

Main Investigators: Daniel L. Drosness and John Derry.

Status of Research and Publications: In process. Report to be issued in 1965.

Agency: State of California, Department of Public Health, Bureau of Hospitals, under sponsorship of U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. To develop a methodology for regular collection, analysis and use of precise information on hospital utilization on a statewide basis. Specifically, the project will seek to achieve the following objectives: (1) identification of that data (relating to hospital utilization) which is essential to improved hospital planning; (2) development of a methodology for collection; (3) development of methods of analysis; and (4) establishment of methods of applying such data. (JL)

4. AGE-INCOME-HEADSHIP-TENURE RELATIONSHIPS IN HOUSING

Main Investigator: Wallace F. Smith.

Status of Research and Publications: In process. Completion expected by mid 1964.

Agency: University of California (Berkeley), Center for Real Estate and Urban Economics.

Previous Digest Report: None.

Research Problem. A model and a set of parameters related to the demand for rental housing.

Hypothesis. (1) Income is related to headship and tenure, and (2) age is related to headship and to tenure.

Method of Study. Census tapes containing data for one person of every one thousand will be used to describe relations among age, income, headship and tenure. A blend of standardization and regression methods will be used. (WFS)

5. THE LOW RISE SPECULATIVE APARTMENT

Main Investigator: Wallace F. Smith.

Status of Research and Publications: In process. Publication in monograph form expected in early 1964.

Agency: University of California (Berkeley), Center for Real Estate and Urban Economics.

Previous Digest Report: None.

Research Problem. Who develops low rise apartments, what are their motivations, what is the procedure in development and sale, and why has this activity increased so markedly?

Previous Relevant Research. Equity investment has been studied by Grebler and Winnick, but emphasis was not on speculative motivations.

Hypotheses. (1) Market conditions explain the upsurge in rental construction; (2) specific conditions favor low rise speculative development; and (3) such development will continue to be a factor in urban growth.

Method of Study. Survey of rental properties developed since 1957 in Oakland and in Walnut Creek, California. Developers, builders, lenders and purchasers have been contacted by questionnaire and/or interview.

Major Findings. Preliminary indications are that all three hypotheses appear to be confirmed. (WFS)

6. PROFILE OF THE LOS ANGELES METROPOLIS: ITS PEOPLE AND ITS HOMES

Main Investigators: Leo Grebler, Fred E. Case, James Gillies, Leland S. Burns, and Frank G. Mittelbach.

Status of Research and Publications: Part I, "Metropolitan Contrasts," by Leo Grebler, and Part 2, "The Changing Housing Inventory: 1950-1959," by Frank G. Mittelbach have been published. Parts 3, 4 and 5 which will deal with financing of residences, the minority population, and the economic and social structure of the communities in the Los Angeles SMSA are in draft form.

Agency: University of California (Los Angeles), Graduate School of Business Administration, Real Estate Research Program.

Previous Digest Report: 10:1-16.

Major Findings. Findings of Part I were discussed in previous Digest report. Part II deals with the changing residential face of Los Angeles in the period 1950 to 1959. It draws for analytical purposes on the Components of Inventory Change series of the U. S. Census of Housing, 1960. Attention is called to the fact that the housing inventory in the Los Angeles SMSA is characterized by both turmoil and stability. Units held over from 1950 have been relatively well taken care of, remaining at approximately the same quality level, using Census definitions, or slightly better than in 1950. Occupants in old and new dwelling units varied markedly with the new units being characterized by a high incidence of "normal" households, a relatively small number of persons 65 years and older, and a large proportion of households with children under six years of age. Comparisons between 1955/56 and 1958/59 indicate that the surge to the outlying areas by those people already living in the Los Angeles SMSA may be subsiding. The rapid growth of the outlying areas apparently owes a great deal to the behavior of immigrants to Los Angeles. (FGM)

7. PATTERNS OF LAND DEVELOPMENT AND PRICES IN THE LOS ANGELES SMSA

Main Investigator: Frank G. Mittelbach.

Status of Research and Publications: In process. Completion expected by December, 1964.

Agency: University of California (Los Angeles), Graduate School of Business Administration, Real Estate Research Program, under sponsorship of U. S. Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. There are reasons to believe that suburban land costs since World War II have risen more rapidly than other major components of housing costs and the general price level. The study investigates the role of the several factors which have contributed to

the increasing relative scarcity of land in the Los Angeles metropolis, and examines prospects for the future.

Method of Study. One phase in this study involves determination of the amount and quality of developable land accessible to major employment centers. The purpose is to establish whether or not an absolute shortage is likely to be experienced within the foreseeable future under various assumptions of intensity of development. In another phase of the study vacant parcels of land ten acres or more are identified at different points in time in two suburban growth areas selected for detailed investigation. Parcels of land which eventually were transferred to an urban use and those which were not will be studied to determine factors which have contributed to their particular use or non-use. Finally, the study will systematically trace the prices of parcels of land both vacant and urban and will explore the factors influencing price changes. (FGM)

8. SAVINGS AND MORTGAGE MARKETS IN CALIFORNIA: THE POSITION AND PERFORMANCE OF THE SAVINGS AND LOAN INDUSTRY

Main Investigators: Leo Grebler and Eugene F. Brigham.

Status of Research and Publications: Report has been published and is available from sponsor. (\$3.25)

Agency: University of California (Los Angeles), Graduate School of Business Administration, Real Estate Research Program, under sponsorship of California Savings and Loan League, Pasadena.

Previous Digest Report: None.

Research Problem. To analyze market performance in terms of the allocative efficiency of the California savings and mortgage markets and the operating efficiency of the California savings and loan industry, which plays an important part in these markets.

Previous Relevant Research. Several descriptive analyses of the relevant markets and institutions exist, but they have usually failed to apply the rigorous concepts of the theory of competition. Edward S. Shaw's recent study "Savings and Loan Market Structures and Market Performance" investigates state chartered savings and loan associations in California without reference to the market habitat in which they operate.

Hypotheses. Inter-industry as well as intra-industry competition must be considered in any examination of the competitive structure of financial markets. The operating ratios of financial institutions of the

same type bear a functional relationship to their asset and liability composition and their various modes of operation.

Method of Study. The study includes the first multiple-regression analysis of operating ratios of savings and loan associations. In addition to standard analysis of existing data, special surveys were used to obtain new estimates of out-of-state deposits held by California savings associations and for various other purposes.

Major Findings. California savings and loan associations operate in a mortgage market which is relatively competitive by the standards of the general economy. However, the system shows a slight degree of oligopoly resulting from the restricted movement of funds between geographic submarkets, limited entry and heterogeneity of product. Altogether, the capacity of the California associations to channel out-of-state funds into the state has enhanced economic welfare. California savings and loan associations are typically high-cost firms as compared to other parts of the country. Higher costs are offset with higher revenues and they usually end up with relatively high net profits. Available data failed to indicate significant internal economies of scale in the California savings and loan industry. (FGM)

9. AN ATTITUDINAL SURVEY OF POLITICAL PARTY PARTICIPANTS IN THE METROPOLIS

Main Investigators: Robert S. Hirschfield, Bert E. Swanson, and Blanche D. Blank.

Status of Research and Publications: Completed. Published: "A Profile of Political Activists in Manhattan," The Western Political Quarterly, Vol. XV, No. 3, September, 1962.

Agency: City University of New York, under sponsorship of Citizenship Clearing House.

Research Problem. To describe and analyze the socio-economic background, policy attitudes, and political activity of political party committeemen and committeewomen in New York City. To compare this with the pictures drawn by previous studies of city machine politicians.

Previous Relevant Research. Harold F. Gosnell, Machine Politics: Chicago Model (Chicago: University of Chicago Press, 1937); Sonya Fortnal, Cogwheels of Democracy (New York: William-Frederick Press, 1946); William Mosher, "Party Government Control at the Grass Roots," National Municipal Review, Vol. 24 (1935); David H. Kurtzman, Methods of Controlling Votes in Philadelphia (Philadelphia: privately printed, 1935); Hugh Bone, Grass Roots Party Leadership (Seattle: University of Washington Press, 1952).

Hypotheses. (1) Socio-economic status (class) is not the dominant determinant in the composition of urban political organization; (2) the major determinants of political affiliation are ideological; there are significant ideological differences among the political parties; (3) the political activist views his party organization primarily as an instrument for effectuating policies rather than as a source of personal gain; (4) all urban political parties draw their personnel largely from the "middle class;" (5) the party in power occupies the "middle of the road" in urban politics; the other parties deviate from center in inverse proportion to their chances of winning office; (6) the dominant party's personnel are much more "professional" in their political attitudes and activities than the members of the minority parties; and (7) religious affiliation and depth of family roots in America are major factors in determining the member's degree of "liberalism" or "conservatism."

Method of Study. Sample survey.

Major Findings. The data gathered on all three parties lead to two general conclusions regarding the nature of urban politics in the United States. First, ideological orientation--more than socio-economic status--is apt to determine the urban activists' political affiliation. The parties' memberships are characterized far less by income, education, and occupation than by varying attitudes toward social and political change, governmental power and policies, minority groups, and established institutions and ideas. Second, there is a "new look" among today's political activists. They are "respectable," solid middle-class citizens. The party "hack" of fiction, films, and the traditional literature is hard to find among the young, well-educated, affluent, and socially acceptable committeemen--and women--of the 1960's. Concomitantly, both the nature of political motivation and the character of political activity have changed. The contemporary politician considers his party organization an instrument for effectuating policy rather than a haven of personal security. He tends to be more interested in social reform than in catering to individual constituents. (BES)

10. A TAXONOMY OF PATTERNS OF CONTROL EXERCISED OVER LOCAL SCHOOL DISTRICTS BY THE VARIOUS STATES

Main Investigator: Charles Burnett Hayes.

Status of Research and Publications: Completed and submitted as doctoral dissertation.

Agency: Columbia University, Teachers' College.

Previous Digest Report: None.

Research Problem. The major purpose of this study is to provide a categorization of the states with respect to a number of controls exercised over education at the state level and a determination of what patterns exist among the states in exercising these controls.

Method of Study. In selecting the controls for study, a search was made of publications of the United States Office of Education, the National Education Association, the codes of school laws of the various states and writings of various persons on matters relative to the problem under study. A graduate seminar in educational administration was polled with regard to the significance of the controls and for additional ones. All data were gathered from documents in which controls are presented as they are written in state laws. Actual practice in some cases may differ from the law. It was not a part of this study to show the differences between the two.

The writer made judgments as to which controls to study on the bases of their importance in educational operations, the influence which they have upon all classes of school districts of a state, the emphasis and frequency with which they were treated in the literature, and the feasibility of finding pertinent data. The controls selected for study were: (1) local school district organization; (2) required school subjects; (3) textbook selection; (4) selection of local school board members; (5) selection of chief state school officers; (6) teacher certification; (7) teacher tenure; (8) budget approval by non-school agencies; (9) vote on local school budget; (10) vote on tax levies; (11) tax rate for current operating expenses; and (12) school audits.

Major Findings. Conclusions drawn from this study may be summarized as follows: There are enough similarities among the states on a group of twelve controls exerted over school districts by the states that the states can be grouped by control patterns. From the control patterns differentiated, it would seem that some states exercise a number of controls over education in such a manner so as to encourage local initiative. Other groups of states tend to exercise controls in such a manner that they would seem to affect greater centralization. Although these are tentative findings and are subject to modifications by subsequent study and to the practical application of the laws, it seems that there are some states which operate with a high degree of state control and others which operate with a low degree of state control. (CBH)

11. POPULATION TRENDS IN CONNECTICUT AND THE NORTHEAST

Main Investigator: Edward G. Stockwell.

Status of Research and Publications: Continuous project in cooperation with Regional Research Project NE-31, "The Effects of Urban-Industrial Expansion on Northeastern Agriculture." Three reports have been published as follows: (1) Edward G. Stockwell, Illustrative Projections of the Population of the New England States, by Age and Sex, 1960-1980, University of Connecticut, AES Progress Report No. 51 (February, 1963). Mimeographed, 29 pages. (2) Edward G. Stockwell and Dorothy G. Ingalls, Illustrative Projections of the Population of the Middle Atlantic States, by Age and Sex, 1960-1980, University of Connecticut, AES Progress Report No. 53 (May, 1963). Mimeographed, 20 pages. (3) Edward G. Stockwell, Dorothy G. Ingalls, and Helene P. Matterson, Illustrative Projections of the South Atlantic States of the Northeast Region, by Age and Sex, 1960-1980, University of Connecticut, AES Working Paper (July, 1963). Mimeographed, 18 pages.

Agency: University of Connecticut, College of Agriculture Experiment Station.

Previous Digest Report: None.

Research Problem. Projections of the population, by age and sex, for the 12 states that make up the Northeast region (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and West Virginia), for quinquennial years through 1980.

Method of Study. Projections were prepared by means of a life table survival method, and are based on the assumptions that recently observed age-sex patterns of fertility, mortality, and migration will not change during the projection period. A detailed description of the methodology is contained in the report for the New England States (Progress Report No. 51).

Major Findings. Bearing in mind that population projections are not predictions, these figures indicate a fairly wide variation in growth patterns within the region during the next two decades, ranging from a population decline of 14 per cent in West Virginia to an increase of well over 100 per cent in Delaware. Connecticut, Maryland, and New Jersey can all anticipate increases of two thirds or more between 1960 and 1980, while the remaining seven states will experience population gains of between 16 per cent (Vermont) and 43 per cent (New Hampshire).

Although there are occasional variations among individual states, the general pattern for the region as a whole revealed by the projections is that future growth will be greatest for the population under 25 and over 65 years of age (a notable exception is West Virginia, where an 11 per cent decline in young people is projected for 1980). There are

two important implications of this general pattern: first, the problems of providing adequate facilities for the education of youth and for the maintenance of senior citizens will become intensified; and secondly, the responsibility for alleviating these problems will have to be borne by a smaller proportion of the total population. (EGS)

12. PROJECTED SCHOOL AND COLLEGE ENROLLMENT IN CONNECTICUT

Main Investigator: Edward G. Stockwell.

Status of Research and Publications: Completed. See Edward G. Stockwell and Robert H. Weller, The Population of Connecticut: Illustrative Projections of School and College Enrollment, 1960-1980, University of Connecticut, AES Progress Report No. 52 (May, 1963). Offset, 12 pages.

Agency: University of Connecticut, College of Agriculture, Experiment Station.

Previous Digest Report: None.

Research Problem. To project, within reasonable limits, prospective number of school and college students in Connecticut in 1965, 1970, 1975 and 1980.

Method of Study. Three different assumptions are made pertaining to the trend in age-sex specific school enrollment rates during the next two decades, and the resulting three sets of rates are applied to a projection of the total population by age and sex based on a life table survival method.

Major Findings. Bearing in mind the limitations inherent in such projective techniques, the resulting figures indicate that the number of potential students 5-24 years of age will increase from 41 to 54 per cent between 1960 and 1980. The projected growth is not uniform for all segments of the school population. Percentage increases will be relatively slight among elementary school children (this group is already quite large, due to the effects of the postwar baby boom); but the high schools and colleges can anticipate very large increases as the postwar birth cohorts age. The problem of increased enrollments is already being felt in the high schools, and by the end of the 1960 decade the colleges will be receiving applications from approximately twice as many students as they do today. Clearly, the colleges of Connecticut face a very real need to expand their facilities in order to meet the educational needs of her young people. (EGS)

13. THE POPULATION EXPLOSION

Main Investigator: Edward G. Stockwell.

Status of Research and Publications: Completed. See Edward G. Stockwell, The Population Explosion: World, National, and Local, University of Connecticut, AES Bulletin No. 378 (July, 1963). Offset, 15 pages.

Agency: University of Connecticut, College of Agriculture, Experiment Station.

Major Findings. This brief article summarizes historical and present population growth trends in the world as a whole, in the United States, and in Connecticut, with special attention being given to the determinants and consequences of these trends. The "theory of demographic transition" is discussed in relation to historical growth patterns, and the differential roles played by fertility, mortality, and migration (international and internal) in both past and recent population growth are described. Although the actual processes through which current growth is taking place on these three levels are not the same, it is readily apparent that all have been characterized by relatively "explosive" population growth since the end of the Second World War. On the international level, recent growth has been greatest among the so-called underdeveloped nations of Asia, Africa, and Latin America, where it is posing a serious problem to current efforts to stimulate economic development and to raise the levels of social and economic well-being. While the Malthusian population problem is not a real threat in the United States, the rapid and substantial increase in the number and proportion of young people generated by the postwar baby boom has put serious pressure on our educational facilities, and under current trends, will continue to do so. This problem becomes even more serious in a State like Connecticut which has to contend with fairly heavy in-migration, as well as the cumulative effects of the postwar fertility revival. (EGS)

14. UNIVERSITY-CITY JOINT VENTURES IN URBAN RENEWAL

Main Investigator: Kermit C. Parsons.

Status of Research and Publications: First stage of field work completed; articles published Journal of Higher Education, Vol. XXIV, Numbers 1 & 4 (January, April 1963), "A Truce in the War Between Universities & Cities" and "Universities & Cities." Reprinted by Division of Urban Studies, Cornell Center for Housing & Environmental Studies. Additional field work to be completed December, 1964. Additional publication: form undetermined at this time.

Agency: Cornell University, College of Architecture, Department of City and Regional Planning, under sponsorship of Cornell University Ford Foundation Public Affairs Research Fund.

Previous Digest Report: 9:2-26.

Major Findings. The long standing antipathy between Anglo-American universities and cities is traced from the six hundred year old rural seclusion of the English University. American urban universities are awakening to the responsibilities and opportunities of this environment. Two significant developments are recorded: the influence of Section 112 of the Housing Act of 1959 on university participation in urban renewal and the various emerging forms of non-profit corporations acting as catalysts for joint city-university renewal. (KCP)

15. UNIVERSITY CAMPUS PLANNING AT CORNELL UNIVERSITY

Main Investigators: Kermit C. Parsons, and Keith Sutherland.

Status of Research and Publications: Research continuing, article to be published early 1964 in Journal of the Society of Architectural Historians. Monograph to be published 1965.

Agency: Cornell University, College of Architecture, Department of City and Regional Planning, supported by grants from Cornell University.

Previous Digest Report: 9:2-27. (KCP)

16. RELOCATION AND MENTAL HEALTH: ADAPTATION UNDER STRESS

Main Investigators: Erich Lindemann and Marc Fried.

Status of Research and Publications: Basic collection of data has been completed and processed, and is now being analyzed and written up. Project began December 1, 1957, and will continue through June 1, 1964. The following papers have been published or accepted for publication: Fried, Marc and Lindemann, Erich: "Sociocultural Factors in Mental Health and Illness," Amer. J. Orthopsychiat., 1961, 31, 87-101; Gans, Herbert: "The Human Implications of Current Redevelopment and Relocation Planning," J. Amer. Inst. of Planners, 1959, 25, 15-25; Gans, Herbert: The Urban Villagers, Glencoe: The Free Press, 1962; Fried, Marc and Gleicher, Peggy: "Some Sources of Residential Satisfaction in an Urban Slum," J. Amer. Inst. of Planners, 27, 1961, 305-315; Fried, Marc: "Grieving for a Lost Home," In: Leonard J. Duhl (Ed.), The Urban Condition, New York: Basic Books, 1963; Ryan, Edward: "Individual Identity in an Urban Slum," In: Leonard J. Duhl (Ed.), The Urban Condition, New York: Basic Books, 1963; Hartman, Chester: "Social Values and Housing Orientations," J. Soc. Issues, 1963, 19, 113-131; Fried, Marc: "The Transitional

Function of Working-Class Communities: Implications for Forced Relocation," to be published in: Mildred Kantor, (Ed.), Mobility and Mental Health, D. Van Nostrand, 1964; Hartman, Chester: "The Limitations of Public Housing: Relocation Choices in a Working-Class Community," to be published in the J. Amer. Inst. of Planners, November, 1963; Zola, Irving Kenneth: "Observations on Gambling in a Lower-Class Setting," Soc. Problems, 1963, 10, 353-361; Fried, Marc and Levin, Joan: "The Social Function of the Urban Slum," to be published in Scientific American; Fried, Marc: "Effects of Social Change on Mental Health," to be published in the Amer. J. Orthopsychiat., January, 1964.

Agency: Center for Community Studies, an affiliate of Massachusetts General Hospital and Harvard Medical School, under sponsorship of National Institute of Mental Health.

Previous Digest Report: 10:1-20. (PM)

17. EMPLOYMENT AND UNEMPLOYMENT IN EAST ST. LOUIS, ILLINOIS

Main Investigator: Jane Schusky.

Status of Research and Publications: Initial analysis has been completed and will be published late in the fall of 1963.

Agency: Southern Illinois University (Edwardsville) Public Administration and Metropolitan Affairs Program.

Previous Digest Report: 9:2-31.

Research Problem. To assess the level and impact of unemployment and underemployment in East St. Louis, Illinois. The study was designed to examine employment and unemployment as characterizing various sub-sectors of the resident population of the city, and the effect of job holding or the lack thereof on the family and on the community.

Method of Study. This study uses a two-stage random sample of approximately 1,300 households in the city of East St. Louis. A questionnaire has been administered in each of these households with supplemental items obtained in households with unemployed or under-employed family heads. Analysis of the data has followed, and comparisons have been made with census and Department of Labor statistics.

Major Findings. It was found that the general level of unemployment in the city was far above the average for the nation and the state. This unemployment most affects the Negro citizenry which comprises approximately

half of the population of East St. Louis. The effects of this high level of unemployment show themselves in disparity of income, of housing conditions and of attitudes toward the employment problem and its possible solutions. Family conditions are not found to vary markedly as a result of unemployment because of a general residential and class distribution placing the unemployed in circumstances not too unlike those of their employed neighbors. (JWS)

18. COMPARATIVE FISCAL CAPACITY AND EFFORT OF UNITS OF GOVERNMENT IN MADISON AND ST. CLAIR COUNTIES, ILLINOIS, 1950 AND 1960

Main Investigator: Leo Cohen.

Status of Research and Publications: Completed and published by agency, March, 1963.

Agency: Southern Illinois University (Edwardsville), Public Administration and Metropolitan Affairs Program.

Previous Digest Report: 9:2-33. (SZM)

19. URBANISM IN ILLINOIS: ITS NATURE, IMPORTANCE AND PROBLEMS

Main Investigators: Jack Isakoff and Seymour Z. Mann.

Status of Research and Publications: Preliminary draft of report completed.

Agency: Southern Illinois University (Edwardsville), Public Administration and Metropolitan Affairs Program, under sponsorship of State of Illinois, Governor's Council of Economic Advisors.

Previous Digest Report: None.

Research Problem. It is proposed that the Governor's Council of Economic Advisors prepare a series of background studies that will enable policy proposals to be made that will guide Illinois during the decade of the seventies and that will serve as guides to what must be done now to accomplish what will need doing during the seventies. This particular study attempts to establish the relationship between growth and development possibilities in the state as a whole as such might be related to the growth and development of the several metropolitan areas in the state. In addition, it develops a set of policy proposals that will relate to state action needed and action needed in terms of intergovernmental relations improvements if the social, political and economic potential of the metropolitan areas is to be fully achieved. (SZM)

20. RECRUITMENT AND DEVELOPMENT PATTERNS OF LEADERSHIP IN THE NEGRO COMMUNITY--
A CASE STUDY

Main Investigators: Elliott Rudwick and Seymour Z. Mann.

Status of Research and Publications: Field work interviewing now underway, methodology for panel activity now being developed. Completion not expected until mid-1964.

Agency: Southern Illinois University (Edwardsville), Public Administration and Metropolitan Affairs Program.

Previous Digest Report: None.

Research Problem. This will essentially be a case study using East St. Louis as a model. East St. Louis, with a total population of some 82,000, is almost evenly divided between white and Negro. The emphasis in the study will be placed on political leadership defined broadly. There has been a long history of Negro involvement with local political organizations and dating from the early 1900's allegations of colonization, vote buying, etc. At the same time, Negroes have held political office at various levels, but never in proportion to their population, although over the years both parties have encouraged Negro voting. At the present time, there is much ferment within the Negro community with old leadership being challenged in the formal political organizations, in the established Negro community organizations--even in church leadership--much of this obviously related to the intensified civil rights movement. The problem will be to assess forces which have given rise to the past and present leadership elements in the community and to examine and evaluate the forces at work producing the emergent leadership. Furthermore, the study will attempt to categorize and classify kinds and types of leadership in terms of style, capacity and the social milieu from which particular leaders have arisen.

It will attempt, further, to project what might be expected in the way of leadership-follower patterns under given kinds of political systems and given kinds of socio-economic circumstances. The relationship between events perceived of as significant to the well-being of the Negro community or perceived of as threats to the well-being of the community and their relationship to leadership recruitment and development will be investigated.

Method of Study. Leadership elements since 1950 will be developed, based on precinct committee people lists, all Negroes who have either run for or have been elected to political office (including all offices in which an East St. Louis electorate was in whole or in part involved), and

all Negroes who have held appointive governmental positions in organizational locations strategic to the maintenance or extension of the control or influence of the dominant political factions or groupings. Data will be elicited through an interview program.

In addition, parallel panels drawn from the white and Negro communities will be used to assess the meaning and significance of event perception in the community and to determine the community's evaluation of leadership selection and performance. (SZM)

21. PUBLIC ATTITUDES AND AIR POLLUTION IN THE ST. LOUIS METROPOLITAN AREA

Main Investigators: Seymour Z. Mann and Jane W. Schusky.

Status of Research and Publications: To be published early in 1964.

Agency: Southern Illinois University (Edwardsville), Public Administration and Metropolitan Affairs Program, and University of Chicago, National Opinion Research Center, under sponsorship of U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. To determine public awareness of and attitudes toward various community problems with a focus on air pollution. To determine in what manner complaints are registered, attitudes are formed and action proposed toward the solution to such problems.

Method of Study. A survey of 1,000 residents of the St. Louis Metropolitan Area. An area probability sample was devised to give data on the city and county of St. Louis and on Madison and St. Clair Counties, Illinois. The National Opinion Research Center conducted all field work in this project with analysis and report to be done by Metropolitan Affairs. (SZM)

22. THE BUDGET IN CENTRAL MANAGEMENT PLANNING

Main Investigator: Joseph M. Heikoff.

Status of Research and Publications: In process. Initiated September, 1963.

Agency: University of Illinois, Bureau of Community Planning, under sponsorship of International City Managers' Association.

Previous Digest Report: None.

Research Problem. Budgeting is an important element in governmental decision making, but it does not appear to have been applied to community planning. The study objective is to discover how budgeting may be used more effectively to integrate departmental functional plans for public health, transportation, education, recreation, and public safety, as well as for land use planning and regulation. Its hypothesis is that the budget should be the conscious financial expression of governmental policies for community development. Development policies include the ordering of priorities, allocating resources, integrating departmental programs, and relating operating costs to capital investment.

Method of Study. Examination of budgeting theory and planning theory to be followed by field studies of the relation of budgeting to planning in several Illinois communities. Complementary case studies will be sought in public administration literature. Current budgeting and planning practice will be evaluated to discover how budgeting can be used more effectively by management for community planning. (JMH)

23. RELATION BETWEEN INTENSITY OF DEVELOPMENT AND LIVABILITY OF MULTI-FAMILY HOUSING PROJECTS

Main Investigator: Robert D. Katz.

Status of Research and Publications: Completed. Published by Federal Housing Administration, Technical Studies Program, FHA No. 509 (Title same as title of research with addition of sub-title - Design Qualities of European and American Housing Projects.)

Agency: University of Illinois, Department of City Planning and Landscape Architecture, under sponsorship of the Graduate College of the University of Illinois, the American Institute of Architects, and the Federal Housing Administration.

Previous Digest Report: 8:2-24; 9:2-42.

Major Findings. Measures of intensity vary in their influence on housing quality. Of a variety of measures examined, density and building type and size are most closely related to aspects of quality (twelve aspects of design quality are identified, defined, and illustrated with photographs of recent housing projects in the United States and Western Europe.) Standards regulating the intensity of housing development have not resulted in significant improvements in design quality. This observation together with the fact that the sites, objectives, and programs for housing vary considerably, even within a single city, are used to support arguments in favor of more flexible standards. Importance of design as a factor in housing appraisal has been neglected in recent years.

Report includes an appendix of site plans and development characteristics of 60 projects. Plans are printed at similar scales to permit comparisons. (RDK)

24. DESIGN AND HOUSING INTENSITY

Main Investigator: Robert D. Katz.

Status of Research and Publications: Research still in the early stage of collecting data and field investigation. It is expected that several reports will be prepared for publication in 1965.

Agency: The University of Illinois, Department of City Planning and Landscape Architecture, under sponsorship of the Federal Housing Administration and the Urban Renewal Administration.

Previous Digest Report: None.

Research Problem. This investigation is aimed at three specific questions. One, are the findings of an earlier study (see Digest report 9:2-42) valid when a great variety of multi-family developments are investigated in cities selected to give a range of climatic, site, and geographic conditions? Two, what are characteristics of site planning that permit increasing the density of single-family housing without loss of livability? And three, what has been the effect of different land disposition procedures, design advisory services and plan review, and site design responsibility on the quality of site design of housing in urban renewal areas? (RDK)

25. RE-USE POTENTIAL AND RESTORATION PROCEDURES FOR SAND AND GRAVEL OPERATIONS

Main Investigator: Anthony M. Bauer.

Status of Research and Publications: In process. Completion expected in September, 1964.

Agency: University of Illinois, Department of City Planning and Landscape Architecture, under sponsorship of National Sand and Gravel Association.

Previous Digest Report: None.

Research Problem. The expanding development of the nation is generating an increasing demand for sand and gravel materials. Economics of transportation limit the distance of a mining operation from the

construction sites, often resulting in the operation being located adjacent to or within an expanding metropolitan area. This often leads to public relations problems with surrounding land owners and communities, difficulties with local zoning and land use regulations, and a loss of natural resources within an economic hauling radius to more acceptable land uses. The objective of this program is to identify the problems common to the sand and gravel industry as they apply to land use; to prepare restoration planning procedures; and to illustrate to the sand and gravel industry the re-use potentials.

Method of Study. A wide variety of sand and gravel operations will be reviewed to determine specific problems and to study adaptability of a range of potential re-uses. Questionnaires will be submitted to members of the industry and an investigation on how zoning and land use regulations will effect restoration projects will be conducted. Also the study will include development of restoration procedures with emphasis on pre-planning and progressive restoration techniques. (AMB)

26. WATER-RESOURCES SYSTEM DESIGN BY OPERATIONS RESEARCH

Main Investigator: Ven Te Chow.

Status of Research and Publications: Study to be incorporated in Handbook of Applied Hydrology by Ven Te Chow, to be published by McGraw-Hill Book Co., Inc., New York, New York in 1964.

Agency: University of Illinois, Engineering Experiment Station and Center for Advanced Study.

Previous Digest Report: None.

Research Problem. This research is being conducted to study and develop the methods of synthetic hydrology and the use of mathematical models in the planning and development of water resources systems. The approach is analytical and mathematical, including various methods of probability, programming technique, and operations research. During the past year, an extensive study of the existing literature was made, and new approaches are being developed and tested. (VTC)

27. MUNICIPAL BUDGETING IN ILLINOIS: SOME PRELIMINARY OBSERVATIONS

Main Investigator: Thomas J. Anton.

Status of Research and Publications: Draft completed; publication expected shortly.

Agency: University of Illinois, Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. The chief purpose of this investigation was to describe the procedures followed by three Illinois cities (circa 100,000) in putting together their budgets. Viewing budgeting behavior as a form of decision-making behavior, the research focused on the questions "How are issues or problems defined?," "How are alternative policies formulated?," and "What criteria are used to choose between alternatives?"

Method of Study. Interviews with local officials were the principal sources of data, supplemented by newspaper clips and other available documentary materials.

Major Findings. The budget process was discovered to be substantially identical in the two cities operating under the manager form of government. However, different kinds of decisions were made in the two manager cities. In the third city, operating under the aldermanic form, the budget process differed, but budgetary outcomes appeared to be similar to the outcomes in one of the manager cities. (TJA)

28. BUDGETING IN THE ILLINOIS POLITICAL SYSTEM

Main Investigator: Thomas J. Anton.

Status of Research and Publications: Research completed; monograph in preparation.

Agency: University of Illinois, Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. This study is designed to describe and explain the system of behavior in terms of which the State of Illinois formulates its biennial budgets. Though focused principally on the activities surrounding the adoption of the budget for the period 1963-65, the study also draws upon relevant historical data concerning persistent patterns of budgeting activity. The activity itself is treated as a form of decision-making behavior and the patterns which emerge are viewed as products of organizational, rather than individual, rationality. Conclusions then attempt to assess the significance of

budgeting in terms of the functions performed by this activity in the Illinois political system.

Method of Study. The study is built upon data gathered through an extensive interview program, observation of budget activity, and review of existing literature with regard to Illinois finance. An initial program of interviews with budget officials from various state agencies was followed by further interviewing and observation of budget preparation in two state departments. The budgets of these agencies were then followed through successive stages of the budget process to provide a firm basis for generalizations about that process. Extensive observation of committee hearings, legislative debate and other legislative activity provides the basis for an assessment of the relative importance of the various participants in the budget process and the kinds of decisions they produce. (TJA)

29. SOME ECONOMIC RECONSIDERATIONS OF ZONING--REMEDIAL, EMERGENT, AND UTOPIAN

Main Investigator: Dean Rickenbach.

Status of Research and Publications: Completed and submitted as doctoral dissertation.

Agency: Indiana University, Graduate School of Business, Department of Economics.

Previous Digest Report: 10:1-31.

Research Problem. To examine historical and contemporary concept of zoning and apply formal economic theory in an analysis of that phenomenon. Question study attempts to answer is: How can zoning be made more effective as a tool to implement city planning? Question is prompted by disappointing literature on zoning, unsatisfactory results of zoning and city planning, and belief in efficacy of market mechanism of decision making.

Major Findings. To analyze the extent to which externalities can develop in a competitive market system a deductive model was used. By comparing different combinations of land-uses, external effects were deduced. It was shown that in combinations of land-uses, external effects can be classified as either neutral, unilaterally complementary or unilaterally uncomplementary and mutually complementary or mutually uncomplementary. Competitive forces can be expected to preclude the need for zoning in many land-use mixes and only when external diseconomies exist or where they are potentially a threat, do we find private incentives for zoning. External diseconomies provide justification for zoning legislation.

It was pointed out that the special features of urban property do not violate the necessary conditions for competition, and that a competitive conceptualization is appropriate for analyzing the impact of external diseconomies on urban property. This impact centers on the demand side. Introduction of external diseconomies reduces the demand (i.e., the capital value) for the property it directly affects. Since external diseconomies are related to "individual tastes" we can expect them to vary from one individual to another. The market impact of external diseconomies is capricious in nature and functionally related to individual tastes, incomes, location, and the supply and demand of "affected" and "unaffected" structures. In general, however, external diseconomies tend to raise rents on unaffected property and lower them on affected property.

It was shown that existing or potential external diseconomies adversely affect the decision to invest in urban property. Moreover, granted certain assumptions, external diseconomies can adversely influence the volume of building, the building-to-land intensity, the design of buildings, and the durability and quality of construction going into new buildings, and consequently can influence the pattern and level of metropolitan growth.

An examination of "imperfect zoning" in the political process of zoning indicated a tendency to over-zone intensive uses of property. Improper zoning admits weaknesses and incongruities in the democracy of zoning when "special" privileges are granted to certain individuals. Problems of under-zoning are not directly attributed to the politics of zoning.

Application of economic analysis to the institution of zoning indicates (1) the economic justification for zoning, (2) the nature, impact, and problems of external diseconomies in urban property, and (3) how zoning can improve patterns of land utilization or make them worse. While economic analysis can indicate the need/or effects of zoning, political analysis indicates that these needs and effects are likely to be compromised. Flexibility and adaptability in zoning are major policy needs. Accordingly, a number of policy implications were examined, and suggestions for further study were made. (JWM)

30. REMEDIAL PROGRAMS FOR LONG-TERM UNEMPLOYED BLUE-COLLAR WORKERS

Main Investigator: Kenton L. Anderson.

Status of Research and Publications: Original study completed in 1961.
Revised and updated in 1963.

Agency: Indiana University, Graduate School of Business, under sponsorship of U. S. Area Redevelopment Administration.

Previous Digest Report: 10:1-32.

Research Problem. A study of 1,280 blue-collar temporary extended unemployment compensation claimants last employed in manufacturing, and whose residence is in or adjacent to Vanderburgh County, Indiana. Study presents and analyzes data concerning selected personal, economic, and social characteristics, and examines certain hypotheses regarding relationship of these characteristics to each other and to length of unemployment.

Major Findings. (1) All blue-collar skill levels, i.e., skilled, semi-skilled, and unskilled, should be included in any proposal to improve the long run employability of workers at the lower end of the occupational ladder. (2) Female, as well as male workers are in need of education, training, and retraining programs. This conclusion is supported by the fact that the sex and skill level variables in this study were related and the relationship was significant at the .001 level of confidence. (3) Almost seven-eighths of all claimants in this study are under 55 years of age and thus, hopefully, have at least ten more years of gainful employment. Of these claimants, 16 per cent are skilled, 35 per cent are semi-skilled, and 49 per cent are unskilled. (4) Of all three skill classifications, skilled claimants had completed relatively more years of school than semi-skilled claimants and they in turn had completed more years of school than unskilled claimants. However, given the projected upturn in unemployment for workers with low skills and number of years of school, it is evident that skilled claimants should be included in proposals for further education, training, and retraining workers with inadequate formal education and occupational skills. (5) Most of the primary wage earners in this study would probably be very unlikely candidates for relocation to another area or for retraining programs, since almost one-half had three or more dependents and nearly all dependents are young children unable to shift to a non-dependent status should the budget be pinched further in order to participate in a retraining and/or relocation effort. (6) Less than one-fifth of all claimants lived in "redevelopment areas" in Evansville, but nearly half were under 35 years of age. This age group accounts for one-half of all semi-skilled and unskilled claimants living in this area. Therefore, efforts to raise the education level and/or specific job skills should be focused primarily on these claimants. (7) Given the number of young children of the claimants, the place of residence in the area, and length of residence in the area (most claimants had lived in the area over 20 years), efforts to relocate workers in other areas of the nation with better employment opportunities should be centered on claimants living in urban areas and specifically in larger metropolitan areas. These claimants are younger, may have weaker ties to the community, and therefore, are more willing to move than claimants living in smaller cities or rural areas. (8) Efforts to improve the employability of claimants in this study should be focused on the younger urban claimants at the lower level of educational attainment and skill. (JWM)

31. BUSINESS RESPONSE TO AGRICULTURAL CHANGE

Main Investigators: Wilbur R. Maki and Jerald R. Barnard.

Status of Research and Publications: Research and analysis about three-fourths complete. Three publications will be completed Spring 1964: (1) Iowa Economic Projections and Interindustry Relations, 1954-1974, Mimeographed report of the Iowa College - Community Research Center; (2) Prospects of Iowa's Economy and People in 1974. Part I: Agricultural Change and State Economic Growth, Research Bulletin of the Iowa Agricultural and Home Economics Experiment Station, and Center for Agricultural and Economic Development Cooperating; and (3) Prospects of Iowa's Economy and People in 1974. Part II: Agricultural Trading Patterns and Regional Development, Research Bulletin, Iowa Agricultural and Home Economics Experiment Station.

Agency: Iowa State University, Agricultural and Home Economics Experiment Station, in cooperation with Iowa College - Community Research Center, and Center for Agricultural and Economic Development.

Previous Digest Report: None.

Research Problem. The agricultural revolution in Iowa has been accompanied by many social and economic problems. Principal among these has been the decline in rural population with its social and economic impact upon local business and social institutions. The objectives of this study are, therefore, to provide information and understanding of the specific effects of a changing agriculture upon business and social institutions in different areas of the state and to ascertain the relation of different policy instruments in the private and public sectors that may be used to promote the economic growth of the state.

Previous Relevant Research. (1) Wright, Deil S., Robert W. Marker, and Garlyn H. Wessel, A Half-Century of Local Governmental Finances: The Case of Iowa - 1910-1960, Institute of Public Affairs, University of Iowa, Iowa City, 1963; (2) Kaldor, Donald R., Ward W. Bauder and Marvin W. Troutwein, Impact of Industrialization on Farming and Farm Living in an Eastern Iowa Community, Research Bulletin, Iowa Agricultural and Home Economics Experiment Station; (3) Funk, Herbert, Effects of Industrialization on Business Firms in a Rural Area, Unpublished Ph. D. dissertation, Iowa State University, 1963.

Method of Study. The general characteristics of the Iowa economy were first studied in their historical setting. The prospective growth of the state economy was ascertained initially by extrapolation of historical trends of population, labor force, employment, income and

productivity. The structural characteristics of the state economy were developed through use of a 33 sector Leontief input-output model for the base year 1954. The impact of agricultural change on Iowa's economic growth was studied in terms of new industries and accelerated rates of industrial development. Needed business and institutional adjustments to agricultural change also were studied to relate the effects of state-level estimates of business activity to the problems of individual communities and their various business activities. Throughout the study emphasis was primarily upon the major determinates of economic change--population, employment, income, and wealth. (JRB)

32. ECONOMIC APPRAISAL OF REGIONAL ADJUSTMENTS IN AGRICULTURAL PRODUCTION AND RESOURCE USE TO MEET CHANGING DEMAND AND TECHNOLOGY

Main Investigator: Ray F. Brokken.

Status of Research and Publications: Present phase of project to be completed in 1963. Publication of model and results will appear in a State Agricultural Experiment Station Bulletin or a USDA Technical Bulletin in the latter part of 1964.

Agency: Iowa State University, Agricultural and Home Economics Experiment Station, under sponsorship of Farm Production Economics Division, Economic Research Service, U. S. Department of Agriculture.

Research Problem. Objective of study is to determine "optimal" location of crop and livestock production among many producing areas within the United States of America under various assumptions regarding regional product demands and levels of technology. The criterion of least total cost of production is taken as the condition for optimality.

Previous Relevant Research. Earlier phases of this project dealt with the production of feed grains and wheat. Optimal spatial production patterns were determined using several different linear programming models. This work is reported in: (1) Egbert, Alvin C. Programming regional adjustments in resource use for grain production. Unpublished Ph. D. thesis. Ames, Iowa, Library, Iowa State University of Science and Technology. 1958. (2) Egbert, Alvin C., and Heady, Earl O. Regional adjustments in grain production: a linear programming analysis, U. S. Department of Agriculture. Agricultural Research Service. Technical Bulletin 1241, and supplement, 1961. (3) Egbert, Alvin C., Heady, Earl O., and Brokken, Ray F. Regional changes in grain production. Center for Agricultural and Economic Adjustment. Iowa State University, Ames, Iowa, CAEA Report 14T. 1962.

Method of Study. Several linear programming models of crop and livestock production and distribution are employed. Each model

features a spatial situation involving many crop producing areas within 20 larger livestock producing and product demand regions for the United States. Each model features production alternatives in feed grains, wheat, soybeans, cotton and harvested roughage in each crop producing area. Land use adjustment possibilities allow crop production areas to shift from intensive to extensive land use alternatives or non-use of land. The livestock production possibilities deal with the production of milk, beef and pork. Interregional transportation possibilities for feed, livestock, and livestock products are also featured. Three basic models are proposed: (1) a model employing coefficients for a historical period will be used to compare the results of the crop-livestock production-distribution model with pattern of wheat and feed grain production obtained from a more aggregative model dealing only with wheat and feed grains, (2) a model that will employ coefficients representing the level of technology in 1965, and (3) a model that will employ a set of normative coefficients. (RFB)

33. FACTORS AFFECTING THE DEMAND FOR FARM LABOR

Main Investigator: Glenn A. Helmers.

Status of Research and Publications: Project was initiated in 1962 and will be completed sometime in 1964. Publication will be in form of doctoral dissertation and a U. S. Department of Agriculture bulletin.

Agency: Iowa State University, Agricultural and Home Economics Experiment Station, under sponsorship of Farm Production Economics Division, Economic Research Service, U. S. Department of Agriculture.

Previous Digest Report: None.

Research Problem. Analysis of supply of and demand for resources used in agricultural production. Farm labor as a resource in agriculture has declined in absolute amount and in relation to other inputs. Capital inputs have substituted for farm labor in agricultural production. Technology and other forces have been important in changes in labor utilization and also in substitution of capital inputs for farm labor. Regionally there have been differential changes in farm labor utilization and the relation between hired and family farm labor.

The objective of this study is to analyze the structure of the demand for hired, family, and total farm labor. The supply structure of farm labor will also be considered due to the difficulty in separating supply and demand of labor. Several objectives will be studied as they relate to the demand, supply, and utilization of farm labor in agriculture: (1) the relation of non-farm economic conditions to labor leaving agriculture; (2) the forces which have caused capital inputs to be substituted for labor

in agriculture; (3) the effect of farm returns and the ratio of farm to non-farm returns to labor utilization in agriculture; (4) what effect technology, prices of competing resources, and other prices have on farm labor; (5) determine the time lags required before these forces operate; (6) examine the structure of demand and supply of hired, family, and total farm labor nationally and regionally.

Method of Study. Several regression models will be used in analyzing the empirical demand for family, hired, and total farm labor. This will be done nationally and regionally. Use will be made of different functional forms and time lags will be stressed. Time series and cross sectional analysis will be employed. Because of the difficulty in separating the supply and demand of farm labor, especially family labor, the simultaneous equation approach will be used in the study. (GH)

34. GROWTH AND INVESTMENT IN THE LIVESTOCK SLAUGHTERING INDUSTRY

Main Investigators: Wilbur R. Maki, Richard Suttor and Roger Truesdale.

Status of Research and Publications: Theoretical model has been specified in general form and part of needed data have been collected. A research bulletin may be published within 6 to 9 months.

Agency: Iowa State University, Department of Economics and Sociology.

Previous Digest Report: None.

Research Problem. To achieve a better understanding of the forces within firms and the relationships between firms which cause growth in the meat packing industry. Study will provide a basis for future research dealing with changes in marketing efficiency in farm related businesses, and the consequences of these changes for both farmers and consumers.

Previous Relevant Research. Some of the relevant theoretical background for this study is provided by A Behavioral Theory of the Firm by Richard M. Cyert and James G. March, and Microanalysis of Socioeconomic Systems: A Simulation Study by Guy Orcutt, et. al. One of the more relevant empirical studies is the University of California Giannini Foundation Research Report No. 260, Economies of Scale in Beef Slaughter Plants by Samuel H. Logan and Gordon A. King.

Hypotheses. One series of hypotheses pertain to rate of capital expenditures in meat packing facilities in relation to the supply of livestock and the degree of the competition for the livestock supply area of the meat packing plant. A secondary series of hypotheses pertain to the nature of the long-run average cost of production curve for

slaughtering plants (i.e., it is nonincreasing for all levels of plant capacity but when the cost of livestock procurement are considered the long-run cost curve becomes increasing after a certain level of capacity is attained. The exact point at which the function becomes increasing will depend upon the density of livestock production and the nature of competition for the supply of livestock.)

Method of Study. A microeconomic simulation model of the livestock slaughtering industry in Iowa is being developed. Costs of production, cost of obtaining livestock, transportation costs, and distribution and selling costs will be combined into total short-run cost function for the firm. Short-run cost functions and fixed costs will be used in deriving long-run cost or planning curve. Also, data on density of livestock production and location and size of present slaughtering facilities in Iowa will be needed for empirical implementation of the model. Model will then be used to simulate competitive interaction and growth and decline of firms over time. (RES)

35. STRUCTURAL ECONOMIC INTEGRATION

Main Investigator: Paul van Moeseke.

Status of Research and Publications: Theoretical analysis completed. Data for the E.E.C. are now being collected with considerable difficulty. Publication of E.E.C. input-output tables (expected end 1963) should allow publication as a journal article by mid-1964.

Agency: Iowa State University, Department of Economics and Sociology, under sponsorship of National Science Foundation.

Previous Digest Report: None.

Research Problem. An interindustry approach to the study of efficient economic integration among regions with known input-output flows. The E.E.C. provides the empirical background of the study.

Part of the theoretical basis of the project are extensions of input-output analysis that incorporate choice and substitution on both supply and demand sides as explained, e.g., in Chenery and Clark /1, ch. 4/.

Method of Study. Various models are studied, aimed at extremizing by linear programming a chosen scalar optimand (joint gross product, total factor use) under restrictions deriving from capacity and factor supply forecasts and minimum (e.g. contemporary) final-use levels. Conjunction of anticipated capacity and resource limitations with demand minima generates an adjustable program sequence of gradual transition toward adoption of the most efficient techniques. Choice, within each

industry, lies with the set of 'regional' production functions. The requirement that all industrial sectors must appear in the final solution substantially alleviates the computational burden. One may then derive several efficiency measures of integration, with respect to any of the aforementioned scalar criteria, as ratios between the programming optima and the actual current sums of the corresponding values per nation. The concept of an efficiency measure is related to Debreu's /2/ coefficient of resource utilization.

Further, the basic activity-analytic model is adapted to encompass, next to the dual categories of outputs and quasirents, the ternary category of regional expansion coefficients. The model allows the determination of equilibrium vectors of (a) production levels, (b) quasirents, and (c) regional expansion coefficients from given target vectors of (1) wage levels (per industry), (2) national products (per region), and (3) final uses (per commodity). Although nonlinear, the model can readily be linearized.

Previous Relevant Research. (1) Chenery, H. B. and Clark, P. G. Interindustry economics. Wiley, New York, 1959; (2) Debreu, G. The coefficient of resource utilization. Econometrica 19: 273-92, 1951. (PVM)

36. EFFECTS OF GOVERNMENT FARM PROGRAMS UPON REGIONAL CHANGES IN CROP PRODUCTION

Main Investigator: Norman K. Whittlesey.

Status of Research and Publications: Project currently near completion. Final report, a doctoral dissertation, will be forthcoming by January 1964. A technical bulletin reflecting the findings of this study should be published during 1964.

Agency: Iowa State University, Department of Economics and Sociology, under sponsorship of Economic Research Service, U. S. Department of Agriculture.

Research Problem. To estimate effects of changes in farm programs directed toward wheat and feed grains on regional crop production and resulting effects on equilibrium prices of land and farm products. Study uses interregional competition linear programming models for estimating shifts in regional crop production in United States agriculture. The criterion of least total cost of production and distribution of farm products is used for determining the optimum allocation of crop production.

Previous Relevant Research. (1) Egbert, Alvin C. Programming regional adjustments in resource use for grain production. Unpublished Ph. D. thesis, Ames, Iowa, Library, Iowa State University of Science and Technology. 1958. (2) Egbert, Alvin C., and Heady, Earl O.

Regional adjustments in grain production: a linear programming analysis.
U. S. Department of Agriculture. Agricultural Research Service. Technical
Bulletin 1241. 1961; Technical Bulletin 1241, Supplement. 1961.

Method of Study. Linear programming has been used to study the spatial equilibrium of the production and distribution of wheat, feed grains, soybeans, and cotton in U. S. agriculture. The models are composed of 144 crop producing regions and 31 consuming regions including the entire conterminous United States. Production of all relevant crops in each producing region is restricted by available cropland and production quotas for each major crop. The land restraints and production quotas are used to simulate various government programs involving wheat and feed grains. Also, variations in assumed price levels were used to reflect changes in demand for farm products and the resulting effects upon regional production. One model features the recognition of land quality within producing regions. Thus, the marginal cropland within a producing region may be retired or employed to satisfy the conditions of optimality described above. (NKW)

37. DESIGN OF THE CENTRAL CITY

Main Investigator: Donald Appleyard.

Status of Research and Publications: In progress; no termination or publication date has been set.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. A study of the design possibilities of the central district of cities. The work builds on earlier studies of perceptual images of people who live and work in cities. The focal point is the fit between the visual image and the functional pattern. The principal survey and design media is the path sequence and network. The study is aimed at suggesting guidelines for urban design that combine presently unappreciated visual qualities with a sense of meaning and purpose. (RWC)

38. POLITICAL ECONOMY

Main Investigator: Edward C. Banfield.

Status of Research and Publications: In process. No publication or termination date has been set.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. An analysis of the logic of choice and of the structure of the choice mechanism in situations in which prices are not set by a competitive market; the theory is developed with special reference to choice problems faced in metropolitan areas. (RWC)

39. VOTING ON PUBLIC EXPENDITURES ISSUES

Main Investigators: Edward C. Banfield and James Q. Wilson.

Status of Research and Publications: In process. No definite publication or termination date has been set.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, under sponsorship of Rockefeller Foundation.

Previous Digest Report: None.

Research Problem. To determine which sectors of the electorate tend to vote for and against various types of local public expenditures issues. Work will be based on an analysis of voting returns from several cities, Cleveland, Chicago, Miami, Los Angeles, and others. (RWC)

40. URBAN GROWTH AND THE FORM OF THE CITY

Main Investigator: Stephen Carr.

Status of Research and Publications: In process. No publication date has been set.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To evaluate changing perceptual form and public image of Rome at various periods during its modern growth. Special attention will be paid to fit of the images, with changing activity patterns, social structure, and basic site and history. An important purpose is to study the adaptability of such a rich and unified city form to the exigencies of rapid growth. (RWC)

41. METROPOLITAN PLANNING IN THE UNITED STATES

Main Investigators: Charles Haar, William Nash, Bernard Frieden, Ralph Conant, and Frank Colcord.

Status of Research and Publications: In process. Completion expected in January, 1964, as a mimeographed report to U. S. Senate Subcommittee on Intergovernmental Relations.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To assess effectiveness of metropolitan planning in the United States. Study will also seek to determine what new federal policies should be advanced to strengthen metropolitan planning, and what political obstacles at the local level stand in the way of improved planning efforts. Field studies in 15 metropolitan areas focus on the character of existing regional planning agencies, and on the political acceptability of certain legislation now pending in the U. S. Senate Subcommittee on Intergovernmental Relations. (RWC)

42. OPTIMAL ALLOCATION OF URBAN TRAFFIC FLOWS

Main Investigator: Alan Hershdorfer.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To formulate a mathematical model of traffic routing controls applicable to urban street networks which takes into account the relation between traffic volume and velocity, the dynamic evolution of congestion conditions, and the desirability of applying controls so as to minimize total system cost. (RWC)

43. FAIR HOUSING DEMONSTRATION PROJECT IN BOSTON: AN EVALUATION OF TECHNIQUES

Main Investigators: Helen Kistin, James Beshers, Thomas Pettigrew, Chuck Tilly, and James Q. Wilson.

Status of Research and Publications: In process. Completion expected in 1965.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University; Fair Housing, Inc., Boston; and U. S. Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. To evaluate methods developed by Fair Housing, Inc. of Boston to identify sales and rental housing opportunities for families of ethnic minority and other socially disadvantaged groups in the metropolitan area. The evaluation is intended to provide guidelines in other communities where similar organizations seek fair housing goals. The report may also have a significant bearing on federal policy development in fair housing programs. (RWC)

44. URBAN SOCIAL STRATIFICATION

Main Investigators: Edward Otto Laumann, Charles Ackerman, and Andrew Effrat.

Status of Research and Publications: Research in process. An initial article, "Ethnic Congregation - Segregation, Stratification, and Assimilation," will be published in the May 1964 issue of Social Forces. (Co-authors James S. Beshers and Benjamin Bradshaw).

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. Nature of the impact of occupational rank and other status characteristics (ethnicity, education, class identification) on social interaction, social mobility, and economic ideology in the urban setting. Social interaction is taken to include intermarriage, friendship, residential and associational patterns. (RWC)

45. SOCIAL CHANGE AND POLITICAL UPHEAVAL IN FRANCE, 1930-1960

Main Investigator: Charles Tilly.

Status of Research and Publications: In process. Several articles and monographs will be published in various places over the next four years. The first of these is "Reflections on the Revolutions of Paris," forthcoming in Social Problems.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To develop classifications and measures of the forms and intensities of political disturbances in France from 1930-1960; to analyze the evolution of the form and the incidence of political disturbances during that period; to investigate in detail the relationship between major social changes, especially urbanization, and the appearance of political disturbances. (RWC)

46. THE ASSIMILATION OF MIGRANTS TO AMERICAN CITIES

Main Investigator: Charles Tilly.

Status of Research and Publications: In progress; no termination or publication date has been set. An article on the study, "The Assimilation of Rural and Urban Migrants to Wilmington, Delaware," was presented to the Rural Sociological Society in August 1962.

Agency: Joint Center for Urban Studies of Massachusetts Institute of Technology and Harvard University, and University of Delaware, under sponsorship of U. S. Department of Agriculture.

Previous Digest Report: None.

Research Problem. To develop and test a theory to account for differences in rates and modes of assimilation among migrants to cities. Research deals especially with relationships of (a) modes and rates of assimilation of migrants to different aspects of urban organization, (b) transfer of statuses, memberships and skills from old community to new, (c) nature of initial attachments of migrants to their cities of destination (e.g. via family vs. via transfer within a national firm, (d) similarity of communities of origin and destination, (e) status of the migrant. Principal data are drawn from 300 interviews with a quota sample of household heads in Wilmington, Delaware. (RWC)

47. AN APPLICATION OF GRAVITY MODEL THEORY TO A SMALL CITY IN KANSAS USING A SMALL SAMPLE OF ORIGIN-DESTINATION DATA

Main Investigator: Bob L. Smith.

Status of Research and Publications: Completed. Report available from Highway Planning Department, Kansas Highway Commission, Topeka, Kansas.

Agency: Kansas State University, Engineering Experiment Station, under sponsorship of Kansas Highway Commission and U. S. Department of Commerce, Bureau of Public Roads.

Research Problem. Application of the gravity model in which the model parameters--trip production, trip attraction and travel time factors--were estimated using data obtained from a small sample of home interviews taken in a sample of origin-destination (O-D) survey zones.

Method of Study. A gravity model was calibrated using the estimations of trip productions and attractions obtained from the small sample of O-D interviews. An additional model was calibrated using the productions and attractions obtained from the comprehensive O-D survey. The resulting distributions were compared with the distributions obtained from the comprehensive survey.

In the sample study, information obtained from interviews from 402 dwelling units in 14 selected zones in the survey area was utilized. The comprehensive O-D study consisted of 2,528 interviews obtained from a 20 per cent sample of dwelling units from all 83 zones in the survey area. The comprehensive survey was conducted in 1959 in Hutchinson, Kansas which had a population of approximately 38,000 persons. The study was limited to the consideration of auto-driver trips in which each trip had both its origin and destination within the survey area.

The auto-driver trips were classified according to trip purpose and the three trip purposes of home-work, home-other, and non-home were studied in detail.

The study was concerned with "present day" traffic rather than with the estimation of future traffic; however the data used in the development of estimating equations for trip attractions and trip productions were those which one could expect to be obtained quickly and economically, and that one could expect to estimate reasonably well for the future.

Major Findings. Current zonal trip productions and attractions were adequately estimated from the mathematical models developed from the small sample of home interviews. Best estimates resulted for home-based trip productions, but estimates of non-home-based trip productions and all trip attractions appeared to be adequate for planning purposes.

Travel time factors for the distribution of trips were satisfactorily estimated by calibrating the gravity model with trip length frequency data developed from the small sample of home interviews.

The gravity model using trip productions and travel time factors developed from the small sample of home interviews distributed trips among all zones to give an adequate reproduction, for planning purposes, of the trip distribution obtained in the comprehensive O-D study. (BLS)

48. KANSAS CITY MUNICIPAL ELECTION STUDY

Main Investigators: John G. Grumm and Howard Neighbor.

Status of Research and Publications: In final analysis and writing stage. Plan to publish as a book through a commercial or university press.

Agency: University of Kansas, Department of Political Science, under sponsorship of Community Studies, Inc., Kansas City, Missouri.

Previous Digest Report: 9:2-68.

Research Problem. To investigate voter attitudes, motivation and behavior and the role played by political organizations and leaders in a local non-partisan election.

Hypotheses. It is hypothesized that the attitudinal structure of the voter in regard to local politics is partially related to attitudes and identifications associated with national politics. Although the institution of "non-partisan" elections is designed to obscure the connection between local elections on the one hand and state and national on the other, the fact that party identifications has been found to play such a major role in voting in the latter suggests that it must play some role in structuring voter attitudes toward local electoral contests. The manner in which the local political groupings adjust to these conditions, and how their goals and strategies are affected by them will also be subject to investigation.

Method of Study. The study is based primarily on a sample survey of the Kansas City electorate. A random area sample of approximately 800 adult residents of the city was drawn. Each person in the sample was interviewed three times: just before the primary, just before the general, and just after the general election. The sample survey was supplemented by interviews with local leaders and party workers.

Major Findings. Preliminary results indicate that there is considerable confusion on the part of the average voters as they approach the local election. This is probably the major cause of low voter turnout in the local as compared to the national elections. In this setting the major political parties were not very active, as such, but a number of other political organizations (some of them transitory) became quite active. One of their major activities was the passing out on election day and before, of printed "slates" or "sample ballots." The voters relied heavily on these to help structure the otherwise confusing perceptions of the local campaign. The role played by the voters' national party affiliations is significant but indirect. Many of the differences found between the voting behavior of Republicans and Democrats in surveys of national elections held true for this local contest. For example, the Republican-oriented

voters participated in the local elections (both primary and general) to a significantly greater degree than did the Democratic-oriented voters. (JGG)

49. GAMING-SIMULATION STUDIES IN URBAN RESOURCE ALLOCATION

Main Investigator: Richard D. Duke.

Status of Research and Publications: Rudimentary simulation has been completed. Current efforts are devoted to testing and elaboration of design features. Several successful trial "runs" have been completed. A report is anticipated in the fall of 1964.

Agency: Michigan State University, Continuing Education Service, Institute for Community Development and Services under a National Science Foundation Faculty Fellowship.

Research Problem. The objective of the research will be to develop a dynamic gaming-simulation of urban land use decision processes to be used primarily for teaching purposes. Its potential value includes its ability to: make explicit the decision-making processes involved; enable a player to view the consequences of a previous decision while the circumstances are fresh in his mind, through compression of time span; force the player to view the decision from the various roles portrayed, creating a broadened perspective for his future actions; familiarize the player with the relative quantities (of land or money, for example) which are involved in the decisions; introduce various decision assisting tools (capital improvement programming in this case); force the student to evaluate the goals, objectives and value structure which are inherent in his decision.

Previous Relevant Research. Gaming-simulation techniques have been developed and successfully employed in many areas, including business management, war games, and industrial planning; chess is a well known example of an early form of this technique. Guetzkow demonstrates an immediate application of this technique for teaching in the area of International Relations. In addition, he argues the usefulness of this tool for theory development: a game or model is constructed, forcing clarification and enunciation of existing theory; the game is played under varying circumstances, the analysis of play result suggesting change or additions to the theoretical base. This process can be repeated indefinitely.

Method of Study. The gaming-simulation, as now conceived, would be a three-player game with "upset" techniques designed against each player. A fourth player would exchange places with any player "bumped" by the automatic upset provisions. The major characteristics of the gaming-simulation

are that simultaneous decisions are required on a two-level basis at each "cycle." The first level of decision is private and involves personal gain; the second involves some public issue, generally a capital improvement. Resources are limited for each level of decision, and each decision results in deterministic consequences at a later date. Second level decisions will revolve around the capital improvement program, with each player being able to influence, and/or be influenced by the program. Attempts will be made to introduce new variables and techniques, and different categories of players. If available, teams will be selected by general category (e.g. city officials, graduate students, faculty, professional planners, real estate men, politicians, etc.) and the results of their play noted. Observations will be maintained on the number of decisions reached, growth rates attained, level of services rendered, etc. These will be analyzed in the final report.

Techniques for increasing the number of variables, the number of players, and the rate of play will be explored. Research potentials of the technique will be considered, particularly as a device for estimating the effects of alternative decisions and for determining the best strategy to achieve a particular objective. Experiments in teaching a particular technique (e.g. Capital Improvement Programming) will be considered. (RDD)

50. MICHIGAN VOCATIONAL EDUCATION EVALUATION STUDY: EVALUATION OF CURRICULUM

Main Investigator: Sigmund Nosow.

Status of Research and Publications: Completed. Available December, 1963 from Michigan State University, School of Education as Chapter III of entire study, or in monograph form from School of Labor and Industrial Relations.

Agency: Michigan State University, School of Labor and Industrial Relations, under sponsorship of Michigan State Department of Public Instruction, Division of Vocational Education.

Previous Digest Report: None.

Research Problem. Evaluation of contemporary vocational education in Michigan's public secondary schools in light of the emergent structure of the labor force and the changing needs of the economy.

Method of Study. The adequacy of curriculum was determined by whether the offerings in vocational education seemed consistent with the needs of those labor markets for which youths were being prepared.

Three crucial sets of variables were considered significant to vocational education (other than quality of facilities, teachers, and counseling): the changing occupational and industrial structures of the local community, the state, the region, and the nation; demographic

patterns of change such as age and sex composition of given communities, participation rates in the labor force, and patterns of in- and out-migration within the state and regionally; and finally, the actual curricular offerings-types and relative distributions of courses in the three fields of vocational preparation, agriculture, trade and industry, and business (office and distributive).

Labor force and demographic data for the entire state and for each of the counties were brought together for the decades 1940-1950 and 1950-1960. These were projected into the 1970's and were compared with past trends and future projections for the region and for the entire country. Not only were changing job opportunities explored, but the background characteristics of the unemployed (age, sex, color, and education) were extensively analyzed.

Curricular offerings for every public school district in Michigan which had kindergarten through 12th grade classes were brought together. Since the county has been widely used as the operational unit for labor market and demographic data, school districts were also combined for entire counties for the analysis.

Major Findings. While in the broadest sense the problems of vocational education reflect marked shifts in the entire economy as they affect employment opportunities and the changing occupational structure, different types of needs and planning for vocational education emerge for the varied localities and school districts. While educators must recognize statewide, regional, and national economic and social trends, they must also recognize the problems characteristic of their own communities.

In Michigan, as in most of the industrial states of the North Central region, the rural areas, removed from the densely populated industrialized cities, have continuously lost their youth through out-migration. Vocational training for local labor markets, often reflected in undue concentration in vocational agriculture, for example, makes little sense. Comparative data of the type presented in this study allow administrators to evaluate their own programs in the light of curricular offerings in other school districts and areas.

As the data suggest, local communities often offer rather diverse programs in an effort to adequately prepare youths for the world of work, both for those who remain at home and those who migrate elsewhere. However, communities with small enrollments frequently dissipate resources in an effort to face realistically the demands of the labor market beyond local boundaries. It is apparent from our analysis that area-wide vocational programs provide one of the few adequate solutions to the problem of training out-state youth for the world of work.

As well as the problem of dropouts which are of major concern to both rural and urban areas, educators in the larger urban centers are beset by the inability of youths from socially underprivileged groups to find job placement, with or without vocational training. Jobs traditionally available to the poorly educated and the socially underprivileged are rapidly dwindling making training for employment an absolute responsibility for all segments of the community.

In order to relieve some of the pressure from employment coming from the 18-24 age group serious effort must be made to train as many as are capable for the technical occupations in which there is going to remain a serious manpower shortage. Community colleges which are ideal for providing this type of training must resist the demands to make them into two-year preparatory schools for the senior colleges throughout the state and region. It should also be recognized that educational institutions cannot be expected to face the brunt of this problem without direct assistance and cooperation from industry. (SN)

51. COMPARATIVE STUDY OF U. S. RIVER BASIN PLANNING COMMISSIONS IN SOUTHEASTERN UNITED STATES AND IN TEXAS

Main Investigator: Robert H. Pealy.

Status of Research and Publications: Studies of both commissions now in first draft. These will be combined into a single monograph. Publication expected in early spring, 1964.

Agency: University of Michigan, Institute of Public Administration.

Previous Digest Report: None.

Research Problem. To evaluate, from an analysis of the southeast and Texas experience, the usefulness of the study commission form of organization in comprehensive river basin planning.

Previous Relevant Research. This study is related to a previously published monograph by the investigator, entitled Comprehensive River Basin Planning: The Arkansas-White-Red Basins Inter-Agency Committee Experience.

Hypotheses. The basic hypothesis was that the decision-makers of both commissions would, because of their past experience, training, and associations tend to perceive the crucial issues in terms of the interests of the federal water agencies or state interests which the decision-makers represented; their perceptions would therefore tend to cause them to favor those interests in crucial matters. Evidence tends to substantiate the hypothesis. (RHP)

52. INTERSTATE METROPOLITAN AREAS

Main Investigator: John M. Winters.

Status of Research and Publications: Completed and published in Legal Problems of Metropolitan Areas Series, Michigan Legal Publications, Ann Arbor, December 1962. Paperbound, 110 pp. \$2.00.

Agency: University of Michigan, Law School, Legislative Research Center.

Previous Digest Report: None.

Research Problem. Twenty-six interstate (and three international) metropolitan areas have special problems arising because different state laws control taxation, planning and zoning, the handling of mass transportation facilities, etc. Three methods are available for effectuating cooperation between the states which each have legal jurisdiction over parts of interstate metropolitan areas: (1) the formal interstate compact, entered into by the concurrence of the states involved and consented to by Congress pursuant to the United States Constitution; (2) various types of working arrangements at the state level without congressional consent; and (3) various types of cooperation by the local governments. Each type of cooperation is discussed in terms of its general legal theory, the actual uses made of it to solve particular problems related to the metropolitan area, its potentialities for expansion for specific purposes, and its general value for these various purposes.

Conclusions. The best policy in dealing with interstate metropolitan area problems is to provide for a general type of local cooperation act and to give any state agencies which deal with these problems the power to cooperate with other states and their local governments. The formal interstate compact with congressional consent should be used only when cooperating governments are unable to solve a particular problem.
(WJP)

53. ADMINISTRATIVE LAW AND LOCAL GOVERNMENT

Main Investigator: Bernie R. Burrus.

Status of Research and Publications: Completed and published in Legal Problems of Metropolitan Areas Series, Michigan Legal Publications, Ann Arbor, May 1963. Paperbound, 139 pp. \$2.00

Agency: University of Michigan, Law School, Legislative Research Center.

Previous Digest Report: None.

Research Problem. Protection of the individual when he is confronted by administrative action by local government. A detailed examination is made of administrative practices with respect to (1) the issuing of permits, licenses, and certificates and (2) special assessments. Administrative practices of the federal and state governments are sketched briefly to provide a background for the discussion of local law.

Constitutional limitations upon administrative action, rules of practice, procedural limitations, and judicial review (all on the local level) are discussed.

A Model Administrative Review Act for Municipal Governments is presented. Three Appendices show in tabular form how 16 states have enacted Administrative Procedure Acts. There has been no corresponding development at the local governmental level.

"Though by no means complete and all-embrasive as a solution to the problem of the Individual versus the State (in its local manifestation), such minimal limitations...as the Model Act embodies should constitute a valuable first step in realigning the balance between governmental absolutism and individual rights at this level." (WJP)

54. THE FINANCES OF METROPOLITAN AREAS

Main Investigator: Larry Elison.

Status of Research and Publications: Completed. Probable publication date December 1963 as paperbound monograph in Legal Problems of Metropolitan Areas Series. (12th and last in the series.)

Agency: University of Michigan, Law School, Legislative Research Center.

Research Problem. To explore the sources of metropolitan finance and the expenditures made by the metropolitan area within the legal frame of reference in an effort to determine what type of government organization and what variety of tax structure is best suited to function legally, effectively, and economically within the standard metropolitan area.

"A study of the metropolitan financial picture should explain the position of present local financial systems; suggest tax possibilities most likely to break the barricades delaying government reorganization; and suggest alternative types of local organization most advantageous and acceptable based on present tax-fiscal arrangements or the most suitable tax structures for present political organizations. Finally, in proposing financial reformation for local government, it is important to give foremost consideration to flexible plans capable of coping with the continually changing problems encountered in the unpredictable metropolitan format." (WJP)

55. THE POTENTIAL IMPACT OF INTERNATIONAL DEVELOPMENT UPON THE DETROIT AREA

Main Investigator: Richard L. Meier.

Status of Research and Publications: Report in preparation, ready in November 1963.

Agency: University of Michigan, School of Natural Resources, Department of Conservation.

Research Problem. What growth elements in international trade could lead to the enhancement of the economic base of the Detroit area? In what way does the prospective emphasis upon economic development in the poorer parts of the world reflect upon a metropolitan area in the United States engaged in manufacturing?

Major Findings. The largest single opportunity by far is in the production of electric power generating equipment and large electric motors. A technological investigation suggested that this equipment may well move to assembly line production in the next decade and a Detroit location offered transport advantages. A brief impact study was carried out to discover land use conflicts generated.

Conclusion. It is concluded that emphasis upon international specialization is inadequate. The unemployment problem requires solution in provision of local services. New kinds of regional accounts are proposed. (RLM)

56. A MANUAL OF TECHNIQUES FOR THE PREPARATION, CONSIDERATION, ADOPTION, AND ADMINISTRATION OF OPERATING BUDGETS AND A MANUAL OF SUGGESTED PRACTICE FOR THE PREPARATION AND ADOPTION OF CAPITAL PROGRAMS AND CAPITAL BUDGETS BY LOCAL GOVERNMENTS

Main Investigators: Lennox L. Moak and Kathryn W. Killian.

Status of Research and Publications: The study was initiated in March 1961 and has been completed. Publication of the findings is expected in December 1963.

Agency: Municipal Finance Officers Association, under sponsorship of Ford Foundation.

Previous Digest Report: 8:2-67; 9:2-84.

Research Problem. In many respects this is not a research project; in others it is. The objective is to discover and record desirable practices in municipal budgeting. Despite the wealth of literature in the field of

budgeting, that relating to processes themselves is comparatively meager. Therefore, harassed finance officers are forced to live "according to their wits" to meet the exigencies of their local situations, particularly in the field of capital budgeting. The current project seeks to determine from existing practices the desirable elements of the operating and capital budget processes and to provide some re-evaluation of those elements traditionally included in these processes as well as those currently excluded.

Previous Relevant Research. Research has been conducted over the past two decades by the Municipal Finance Officers Association in the field of improved budgetary techniques for operating budgets.

Method of Study. An outline was developed for the project detailing certain of the bases of budgeting and the development of municipal budgeting and itemizing each step in the operating and capital budget processes. Primary source materials for the study were received from fourteen cities in the United States and three cities in Canada. Each city submitted selected documents relating to its local budget preparation, adoption, and control procedures. These documents were reviewed and a description of current budget procedures was compiled from the foregoing and the findings of extensive field interviews. Draft materials were reviewed by the representatives of the participating cities, the Committee on Budgeting of the Municipal Finance Officers Association, and consultants engaged for the project.

Major Findings. In an introductory section of the Operating Budget Manual the authors have traced the development of municipal budgeting in the United States and Canada and the bases upon which the budget is built including the legal, political, and economic forces, among others, which influence budgetary requirements. As regards the administrative base, the authors have concluded that given the wide array of organizational patterns which have worked successfully there is no single "best" location for a central budget agency. However, such an agency should be responsible to the chief executive and the choice narrows to three basic alternatives: (1) a principal budget officer who is part of the office of the chief executive, (2) a principal budget officer who heads a cluster of administrative services or housekeeping functions, known as a chief administrative officer, or (3) a centralized department of finance. The manual recommends the specific data to be secured by the central budget agency regarding departmental needs and prescribes a system of forms designed to secure such information. A recommendation is also made as to the allocation of time throughout the budget cycle and the types of information to be transmitted to the operating departments from the central budget or finance office, e.g., price lists, personnel data, and historical data.

Regarding the estimating process used by the departments, the following generalizations have been made with respect to the cities surveyed: (1) in determining work program requirements departmental personnel in each of the cities rely on open-end budgeting or work measurement; (2) in establishing personnel needs work measurement is the principal factor in the majority of cooperating cities; in the remainder historical is relied upon; (3) in the field of contractual services the survey cities, without exception, rely on open-end budgeting coupled with historical analysis; (4) in estimating the cost of materials and supplies, historical analysis and workload measurement account for the methods used in all of the cities; (5) in determining equipment needs, most cities have progressed to the use of a fixed ceiling for items to be replaced. However, in some instances, open-end budgeting is once again utilized.

The manual details specific procedures for the review of departmental requests by the central budget agency, the chief executive, and the legislative body. For example, recommendations have been made for the assignment of budget office personnel to specific departments both during budget preparation and throughout the year; that, if the central budget agency holds independent hearings, those conducted by the chief executive for departmental representatives be on a selective basis; that the budget data submitted to the legislative body be so organized as to facilitate, rather than hinder, that body's study of budget detail as well as a recommendation that staff assistance, either an auditor or specially designated staff, be assigned to the legislative body to aid it in its review.

In the final chapters of the manual the authors describe the system of budgetary controls currently in effect in all of the survey cities, noting that some of these controls (including some of the most widely used controls) work against, rather than for, effective budget execution. For example, the manual inveighs against the unquestioning use of an allotment system, sustained "job freezes," processing requisitions for authorized but unfilled positions through the budget office, etc. Finally, the manual treats of the post-audit of finances and recommends that cities move in the direction of a post-audit of performance.

The introduction to the Capital Budget Manual describes the development of this aspect of budgeting and summarizes the bases on which the budget must be built, detailing only the administrative base. In the field of capital programming and capital budgeting a wide variety of organizational patterns is encountered. The general pattern for assignment of these responsibilities is to (1) an "administrative" planning commission, (2) a planning director subject to a planning commission, and (3) an ad hoc capital improvement program committee. Among these patterns the authors prefer an "administrative" planning commission but this does not foreclose the possibility of the successful use of the other types of arrangement.

The manual recommends the specific data to be secured by the capital program agency regarding departmental needs and prescribes a system of forms designed to secure such information. A recommendation is also made as to the allocation of time throughout the budget cycle. It is further recommended that each department be staffed to discharge the following activities related to the preparation of the capital program it is seeking: (1) maintenance of a comprehensive inventory of the department's physical facilities; (2) maintenance of records showing the patterns of use of such facilities; (3) maintenance of records indicating the cost of operation and maintenance of each of these facilities; (4) provision of estimates of prices of facilities sought, preparation of the preliminary and final plans for such facilities (on its own, in cooperation with another department, or by contract), supervision of the work involved in construction of the facilities; (5) conversion of work program statements into physical facilities; (6) determination of the impact of a new facility on its own operating costs.

Once the departments have prepared their capital program requests, the manual recommends an intermediate review--part of it to be carried out by the central budget agency and part by a technical review unit staffed by architects and engineers that are independent of the departments that have prepared the plans, specifications, and cost estimates for the individual projects. Next, it is the responsibility of the capital program agency to determine changes between the departmental request and any previous requests, relate proposed projects to the city's comprehensive development plan and long-term work programs, hear departmental representatives, prepare a plan of financing, and transmit a recommended capital program to the chief executive. Once again, the details of executive and legislative review are specified as in the Operating Budget Manual. This manual concludes with recommendations concerning the amendment process on the presumption that other elements of capital budget execution are related to other broad fields and therefore not subject to inclusion in a manual such as the current undertaking. (LLM)

57. METROPOLITAN ECONOMIC PROJECTION SERIES

Main Investigators: Mannie Kupinsky and Sidney Sonenblum.

Status of Research and Publications: Development of techniques and collection of basic data well underway.

Agency: National Planning Association.

Previous Digest Report: None.

Research Problem. Projections of population, employment, personal income, and output for about 60 selected standard metropolitan areas. (MK)

58. OCCUPATIONAL EMPLOYMENT PROJECTIONS FOR SOUTHERN STATES

Main Investigators: Mannie Kupinsky and Paul Schweitzer.

Status of Research and Publications: Study completed.

Agency: National Planning Association.

Previous Digest Report: 9:2-55; 10:1-38.

Research Problem. Analysis of state changes in occupational distribution of employment under the impact of emerging economic conditions such as new technologies, changing consumption habits, interregional migration of plant and people, and the private and public policies designed to adjust to these changing conditions. (MK)

59. REGIONAL ECONOMIC PROJECTIONS SERIES

Main Investigators: Sidney Sonenblum, Mannie Kupinsky, and Ahmad Al-Samarrie.

Status of Research and Publications: Total employment for 1947, 1957, 1960 and 1976 estimated for each state by major industry division and two-digit manufacturing industries. Personal income and components (such as labor income, proprietors' income, etc.) and gross products originating and components (such as employee compensation, dividends, interest, etc.) estimated for each state for 1947, 1957, and 1976. Total population projected to 1976 for each state. Estimates of age and sex distribution of population and labor force in 1976 for each state have been worked up. The employment, income, gross product originating, and population data with analyses of these data comprise the 1962 edition of the Regional Economic Projection Series. The first report of the Series covering employment has been published. The second report covering income and output was published in March 1963. The third report, containing state population, labor force, and net migration data, will be published in December 1963. The entire series is available on an annual subscription basis.

Agency: National Planning Association.

Previous Digest Report: 9:2-56; 10:1-38. (MK)

60. THE ECONOMICS OF THE PROPERTY TAX IN THE UNITED STATES

Main Investigator: Dick Netzer.

Status of Research and Publications: Project initiated in October 1962, as a two-year study, with publication scheduled for the end of that period.

Agency: New York University, Graduate School of Public Administration, under a grant from the Program of Studies in Government Finance, The Brookings Institution.

Previous Digest Report: None.

Research Problem. After a long historic decline in its relative importance in state and local government finance, the role of the property tax has stabilized in the last decade. It is producing large and increasing amounts of revenue, keeping pace with rising public expenditures. Yet, the many deficiencies of the tax--its administrative weakness, its regressivity, its impact on housing and economic development--are no less severe than they were a generation and more ago when the tax was being denounced by scholars from all sides. Moreover, new problems have arisen in the application of high property tax rates in an urban society, in the form of intra-metropolitan fiscal difficulties and tax-induced changes in land use patterns and plans. No comprehensive study of the property tax has been made since the late 1920's, although many new and relevant data are available to assist such an appraisal.

Method of Study. The study will be partly analytical and partly empirical, relying heavily on existing sources of data in the Census of Governments, the economic, population, and housing Censuses, the national income accounts, and the national wealth estimates. It will analyze who actually pays the tax, by sector of the economy, industry, income group, and geographic components of urban areas, and relate tax payments to measures of income and wealth. It will appraise the economic and land use effects of the tax, and its future productivity. Finally, it will examine the case for reform of the property tax and/or substitution of other revenue sources. (DN)

61. TRENDS IN MARKET VALUE OF REAL PROPERTY IN CENTRAL AREAS OF TWO NORTH CAROLINA CITIES

Main Investigator: Ruth L. Mace.

Status of Research and Publications: Completed. Paper to be published as a journal article. A few copies of a mimeographed, preliminary version are available on request.

Agency: University of North Carolina, Institute of Government, in cooperation with the Greensboro (N. C.) City Planning Department, the Greensboro firm of Robins and Weill, and the Forsyth County Tax Department.

Previous Digest Report: 9:2-92.

Research Problem. The problem was to identify and document trends in the market value of center city real property in Greensboro and Winston-Salem, North Carolina over the 1950-1960 decade.

Method of Study. It was recognized at the outset that the best way to determine the market value of real property is to find out about the sums of money involved in actual sales. We suspected, however, and soon convinced ourselves, that relatively few transfers take place in city centers. Therefore, a variety of methods were employed, with the research design for each city being largely determined by available data sources.

Major Findings. Findings of the study suggest stagnation or decline in real property market values in both cities, with declines apparently corresponding in time to suburban shopping center construction. There were, however, significant exceptions to the over-all downtrend. In particular, rising values were observed in the zones of changing uses immediately adjacent to and around the inner commercial cores. (RLM)

62. FACTORS OF INDUSTRIAL LOCATION IN OHIO

Main Investigators: Henry L. Hunker and Alfred J. Wright.

Status of Research and Publications: Currently awaiting page proof.
Publication expected within 1-2 months. Will appear as a hard-back volume.

Agency: Ohio State University, Bureau of Business Research and Department of Geography.

Previous Digest Report: None.

Research Problem. A study of 545 manufacturing firms which located in Ohio since 1939 with respect to the reasons for location in Ohio.

Major Findings. Of the total sample, 61 per cent of the firms had established in the state as independent operations, 24 per cent as branch plants of national organizations, and the remainder as branches of Ohio firms. Approximately 80 per cent of the participants were interviewed; the remainder received questionnaires. Among the major reasons listed for location in Ohio were market accessibility, labor, materials accessibility, availability of buildings and sites, residence of the owner, and transportation facilities. But other factors such as

community size, tax structure, research facilities, and industrial linkage were also found to be contributing and, occasionally, decisive influences. Each of the 18 separate factors considered in the study is evaluated in terms of its impact upon the patterns of industrial location in Ohio. A summary and conclusion bring together the major points relative to the role the individual factors play in plant location decisions. (HLH)

63. THE ECONOMIC AND SOCIAL IMPACT OF A MULTIPLE PURPOSE RESOURCE DEVELOPMENT PROJECT IN GUERNSEY COUNTY, OHIO

Main Investigators: Wade Andrews, John S. Sitterley, A. J. Wright, and Charles A. Dambach.

Status of Research and Publications: An M.S. Thesis by James R. Taylor on economics of agriculture in the area completed and submitted to Department of Agricultural Economics and Rural Sociology. A study of social impact of the project has been completed by Wade H. Andrews and Larry Hines, and a report filed with Natural Resources Institute. A study of industry related to development of the project, by Nelson V. Frazier, to be submitted as a doctoral dissertation in the Department of Geography, is in process.

Agency: Ohio State University, Natural Resources Institute, in cooperation with the Department of Agricultural Economics and Rural Sociology and the Department of Geography.

Previous Digest Report: None.

Research Problem. The study concerns the economic and social impact of the displacement of agriculture from a thirty thousand acre area of land in the eastern part of the State for the purpose of establishing a water supply reservoir to enhance industrial development in the City of Cambridge, Ohio, and to provide recreational facilities accessible to the heavy populated northeastern part of the State. A major objective is to measure all related economic and social benefits as a consequence of project development from a base line established before project initiation.

Method of Study. The method of study has been to determine pre-project land use, economic return from land use, level of living of the resident population, status of social institutions within and influenced by the project area, industrial and other business activity within and related to the project area. As the project develops resurveys will be made to determine economic and social changes which take place. (CAD)

64. DATA REQUIREMENTS AND METHODS OF ANALYSIS FOR METROPOLITAN ECONOMIC PLANNING AND DEVELOPMENT IN PENNSYLVANIA

Main Investigators: Morris Hamburg, John H. Norton, and Thomas W. Langford, Jr.

Status of Research and Publications: This project has resulted in a series of three studies: (1) M. Hamburg, Economic Base Studies for Urban Planning and Development in Pennsylvania, April, 1962; (2) M. Hamburg and J. H. Norton, An Evaluation of Selected Data Requirements and Availability for Urban Economic Planning and Development in Pennsylvania; and (3) M. Hamburg and T. W. Langford, Jr., Selected Methods of Analysis for Urban Economic Planning and Development in Pennsylvania: Commentary on Regional Economic Accounting Systems, Benefit-Cost Analysis and Statistical Decision Theory. The second and third studies are in press and will be published in November or December, 1963. Copies of all papers may be obtained (without charge) from Bureau of Statistics, Department of Internal Affairs, Commonwealth of Pennsylvania, Harrisburg, Pennsylvania.

Agency: University of Pennsylvania, Department of Economic and Social Statistics, under sponsorship of Department of Internal Affairs, Commonwealth of Pennsylvania.

Previous Digest Report: 9:2-101.

Research Problem. Of the three papers listed above, the first is a background study which presents a description and evaluation of economic surveys, usually called economic base studies, which were carried out in Pennsylvania under the "701 program" of the Federal H.H.F.A.

The second is an evaluative report on selected regional and local area data requirements and availability for economic studies in urban planning and development in Pennsylvania. Three critical categories of information are examined: population, employment and personal income. Recommendations are presented on possible changes and improvements in these data.

The third discusses selected frameworks and methods of analysis useful in connection with public policy formulation and evaluation and for improvement of decision-making in urban economic planning and development. A regional economic accounting system for Pennsylvania is presented and a combination of benefit-cost analysis and modern statistical decision theory is developed as a formal method for the appraisal of governmental investment projects. (MH)

65. FINANCES OF SUBURBAN MUNICIPALITIES

Main Investigators: Morton Lustig and John T. McHugh.

Status of Research and Publications: In process. Completion expected within six months.

Agency: University of Pennsylvania, Fels Institute of Local and State Government, Government Consulting Service, under sponsorship of the Fels Fund.

Research Problem. The major objective is to gain a better understanding of differences in local governmental services and tax burdens in "rich" and "poor" suburbs. Better understanding may, in turn, illuminate the need for change in methods of financing local government or in channels or methods of providing governmental services. A secondary objective is to analyze the impact of real property taxes on different groups of taxpayers within the same group of suburban municipalities. This analysis will also test the "equity" of the real property tax.

Method of Study. Interviews with officials in each of the municipalities under study to obtain data on revenues, expenditures, and services performed by the municipality, school district, and authority. Review of published material, focused primarily on the complex matter of property tax "impact." Some parts of this analysis are too intricate for the study at hand and will not be pursued further.

Preliminary Findings. (1) Differences in wealth are reflected in both differences in service levels and in tax load. (2) The "poor" municipalities save by performing some services at a lower level and by omitting other services entirely. The omitted services, such as refuse collection, may cost the taxpayer more as private services than they would as governmental services. (3) Wealth does not always stimulate a higher level of services. (4) "Poor" municipalities use non-property taxes to distribute the tax burden; "wealthy" municipalities are more likely to concentrate on property taxes. (5) State aid effectively cancels much of the difference between "wealthy" and "poor" school districts. (6) Among individuals, the property tax is apparently regressive, taking a larger proportion of income from low-income families than from high-income families. (ML)

66. OPEN SPACE IN METROPOLITAN AREAS

Main Investigators: Morton Lustig and Lawrence Levine.

Status of Research and Publications: One part of the study relating to conservation, chiefly wet-lands, completed and published. See Metropolitan Conservation: Implications for Open Space Policy, Planning, and Implementation. 54p., mimeo. The more general part of the study relating to overall requirements scheduled for completion in six to nine months.

Agency: University of Pennsylvania, Fels Institute of Local and State Government, Government Consulting Service.

Research Problem. One objective is to develop a unified concept of open space for a metropolitan area. In particular, this part of the study is directed to the non-recreational uses of open land, including the concepts of open space to separate one metropolitan area from another and open space to guide or limit the overall size of metropolitan areas. A second objective is to explore in depth one type of open space--conservation areas, particularly those related to the movement and containment of water. In both parts, the project will be related to several basic points: (1) defining the objectives of acquiring or controlling open space; (2) defining standards for the types and characteristics of land (or water) areas which satisfy the objectives; (3) selecting the devices for acquiring or controlling open space which are most appropriate for each type of open space; and (4) reviewing the governmental problems, including intergovernmental conflict, involved in establishing large areas of permanent open space.

Major Findings. The conservation report notes the importance of water-related areas to reducing flood hazards, providing adequate water supply, maintaining storm drainage. Land important for these purposes can also be used for, or in conjunction with, other open space objectives such as recreation, preservation of historical or scenic areas, and separation of urban areas. Both purchase and regulation are needed for the large land areas involved, and the state is probably the best agency to exercise leadership in this field. (ML)

67. STUDY OF URBAN LAND UTILIZATION AND COSTS

Main Investigators: Chester Rapkin, Grace Milgram, and Christine Mansfield.

Status of Research and Publications: Project begun July 1, 1963. To be completed in 18 months.

Agency: University of Pennsylvania, Institute for Urban Studies, under sponsorship of Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. Using a section of the Philadelphia metropolitan area as representative of development in the area, an intensive study will be made of the rate at which vacant land came into urban use since 1945, and the effect of such development on land prices, in an attempt to explore the relationships among the rate of utilization; changing land costs and governmental, institutional, and individual actions which affect these. Such factors as changing time-distance from the central business district, zoning designations, the installation of public facilities, the type of ownership, and the purposes for which the land is

eventually used will be examined, as well as the effect of the general economic development and population growth of the area. It is hoped that the results of the study will be helpful in the formulation of governmental policies affecting land costs and utilization. (GM)

68. AN AREA DATA SERVICE FEASIBILITY STUDY

Main Investigators: Wroe Alderson and Stanley J. Shapiro, with H. Loomer, J. V. Mowll, D. T. Rowlands, E. Smolensky, and T. W. Langford.

Status of Research and Publications: Research was completed as of September, 1962. A decision concerning publication of the final report has not yet been made. A general discussion, however, may be found in Business Horizons, Volume VI, No. 2 (Summer 1963) "A Metropolitan Data Bank for the Business Community" by W. Alderson and S. J. Shapiro.

Agency: University of Pennsylvania, Management Science Institute, under sponsorship of Pennsylvania - New Jersey - Delaware Metropolitan Project, Inc., (Penjerdel).

Previous Digest Report: 8:2-79.

Research Problem. The design of an Area Data Service capable of providing the region with current and complete data on pertinent economic activity and demographic phenomena. Emphasis was to be placed on establishing a service that would meet the planning and decision making needs of public agencies, private institutions and business firms. Various types of systems were to be considered and attention paid to conditions unique to the region.

Major Findings. The research staff considered the present status of related undertakings in various metropolitan areas and the expressed desires of many regional economists. Interviews with representatives of government agencies, health and welfare organizations, business firms, citizens' planning groups, and regional economists revealed that inadequate, incomplete and inaccurate data was only one of the problems being encountered. In many cases, lack of an adequate analytical framework for interpreting existing information and guiding future data collection was the real difficulty.

The report presents five possible designs for an area data service operating in the eleven county Penjerdel region. These include: (1) a secondary data utilization center; (2) a parcel level, land-use, real-property inventory; (3) a design emphasizing changes over time in locational patterns and intra-regional movement; (4) a system of regional social accounts; and (5) a capital expenditure evaluation (cost-benefit)

model. Designs 2-5 were advanced both as alternatives in their own right or as additional functions of a statistical service collecting and processing secondary data. Also discussed were how each of the proposed area data services would serve public agencies and the business community, possible sources of financial support for such a service, and relevant factors concerning personnel selection and organizational structure. (TWL)

69. AMERICAN METALS INDUSTRY STUDY

Main Investigators: Edgar M. Hoover and Alan Fechter.

Status of Research and Publications: In process.

Agency: University of Pittsburgh, Center for Regional Economic Studies, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: 9:2-114.

Research Problem. This project attempts to explain the spatial shifts that have occurred in the group of industries which produce and fabricate metals and metals products.

Method of Study. Data are being compiled from the U. S. Bureau of the Census' periodic Census of Manufacturers describing output and employment in these industries by states and regions to determine the spatial shifts that have occurred over the past 70 years. These shifts will be evaluated alongside of population shifts and changing regional patterns of wage rates and access to raw materials.

A detailed analysis will be made of the post-war period. The spatial shifts of these industries will be examined to see if they have been in response to changes in profit rates in different areas of the country. Regional factors which give rise to these profit rate differentials will also be analyzed to determine which economic variables exert the most influence on them. (AEF)

70. APPALACHIAN PROJECT

Main Investigator: Benjamin Chinitz.

Status of Research and Publications: First report due January 1, 1964.

Agency: University of Pittsburgh, Center for Regional Economic Studies, under sponsorship of Area Redevelopment Administration.

Previous Digest Report: None.

Research Problem. To produce a diagnosis of the economy of the Appalachian Region and a plan for stimulating its more rapid development. The project was inaugurated in response to the establishment by President Kennedy of a special commission to develop a program for the Appalachian Region. The study is an interdisciplinary one, involving sociologists, political scientists, geographers, educators, as well as economists.

The staff for this project has been recruited from within the Center, other parts of the University, other universities, and private consultants. In addition to the staff working at the Center, the contract provides for staff assistance to the President's Appalachian Region Commission in Washington. The research program at the Center will attempt to identify the causes of sluggish economic development in the region and develop a framework for testing the feasibility of programs designed to raise the level of productivity and create a better balance of the supply of and the demand for labor. Included in the agenda will be an examination of the natural resources of the region and their potential contribution to the economy, the influence of transportation, and the development of the human resources of the region. The political and social structure will also receive intensive study. (BC)

71. THE ECONOMICS OF FLOOD PLAIN USE AND REGULATION

Main Investigator: William C. Pendleton.

Status of Research and Publications: Study begun in April, 1963.

Agency: University of Pittsburgh, Center for Regional Economic Studies, under grant from Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. The study views public management of land use in the flood plain as a variable that may be used along with management of the flood as a means of reducing flood damages. The optimum combination of these inputs will be analyzed with a view to providing useful guides to efficient land use regulation. The patterns of development on selected flood plains in the Pittsburgh Region will be studied and an attempt will be made to identify and estimate the costs and benefits associated with alternative combinations of flood protection, flood proofing, and controls over land use in these areas.

Previous Relevant Research. The series of studies conducted at the University of Chicago under the direction of Gilbert White constitute the most relevant body of knowledge in this area. Most of these have been published in the Department of Geography Research Papers series. (WCP)

72. SOCIAL AND CULTURAL FACTORS RELATED TO SCHOOL ACHIEVEMENT

Main Investigators: Bernard Goldstein, and William M. Phillips, Jr.

Status of Research and Publications: Field work is to begin in November 1963, and is scheduled for completion by August, 1964. Project is scheduled for completion by September 30, 1965.

Agency: Rutgers-The State University, Urban Studies Center, under sponsorship of U. S. Office of Education.

Previous Digest Report: 9:2-120.

Research Problem. The study is a phase of the Newark Youth Opportunities Unlimited extension project. The purpose is twofold: to establish benchmarks against which to measure the effects of subsequent interventions in the form of demonstration projects; to gain insight and understanding into the way of life of youngsters growing up in this kind of an area, in order to better appreciate what the world looks like to them, and what it would take to interest them in exerting a greater effort to obtain an adequate education.

Method of Study. Interviews of a sample of youth from grades 4, 6, 8, 10, and 12 in schools in the project area (including in the sample dropouts who "should" have been in the specific grades), as well as to have at least one participating observer living in the area. The analysis of the data will focus on the deviant cases, those who achieve in school at a level different from what would be expected on the basis of social background. (HG)

73. RESIDENTIAL STABILITY IN AMERICAN CITIES

Main Investigators: Robert Gutman and Judith Getis.

Status of Research and Publications: Project has been redesigned to include some new measures of residential stability. Data are now being prepared for analysis on IBM 1620 computer. Sample has been reduced to include data only for 55 SMSA's of 500,000 population or over and 25 cities of 250,000 population or over according to 1960 census.

Agency: Rutgers-The State University, Urban Studies Center.

Previous Digest Report: 9:2-121.

Research Problem. To study the rate of population turnover in central cities and suburban portions of Standard Metropolitan Statistical

Areas in the United States, based on data from the Federal Census of 1960.

Method of Study. Six measures of residential stability for each SMA have been calculated and the research is now directed to testing several different alternative explanations of the variations in these rates among the SMA's. (HG)

74. DEMOGRAPHIC AND ECOLOGICAL CHARACTERISTICS OF THE AGING

Main Investigator: Don Heisel.

Status of Research and Publications: Analysis is completed and is presently being written up. Final Report expected before the end of 1963.

Agency: Rutgers-The State University, Urban Studies Center, under sponsorship of New Jersey State Division of Aging.

Previous Digest Report: 9:2-123.

Research Problem. Description and analysis of demographic and ecological characteristics of older persons in New Jersey, with particular attention to the impact of the "Senior Citizens' Tax Exemption." (HG)

75. SERVICE CENTERS AND CONSUMER INTERACTION ON THE METROPOLITAN FRINGE: STUDIES IN THE PENJERDEL REGION

Main Investigators: John E. Brush and Howard L. Gauthier, Jr.

Status of Research and Publications: Field work and statistical analysis have been completed. Report in preparation; publication expected in late 1963.

Agency: Rutgers-The State University, Department of Geography, under sponsorship of the Rutgers Research Council and the Pennsylvania-New Jersey-Delaware Metropolitan Project, Inc.

Previous Digest Report: 10:1-71.

Research Problem. The studies undertaken in Bucks County, Pennsylvania and in Burlington and Gloucester Counties, New Jersey, on the fringes of the Philadelphia-Trenton metropolitan region are designed to gain understanding of the spatial patterns of old and new service centers in areas of rapid population increase. Decentralization of population and of consumer services seem to be altering the fundamental relationship of service areas as previously analyzed and understood by geographers, planners and other social scientists.

Hypotheses. The interaction of consumers with numerous shopping centers and highway strips is more or less random within vague limits of time and travel cost.

Method of Study. Attention is first concentrated on the spatial grouping of business establishments and second, upon the orientation, frequency and length of trips made by local residents for shopping and personal business. Establishments and trips are both classified into nine business or service types in order to determine the linkages characterizing consumer movements. The data on existing service and shopping facilities were obtained in the field by the Rutgers Geography Department. Trip data were obtained in household interviews, made by personnel of the Penn-Jersey Transportation Study.

Major Findings. Preliminary results show evidence that well defined consumer travel gradients exist in the metropolitan fringe. Service areas can be discerned, although close spacing of service centers and overlapping of travel gradients creates boundaries of only relative predominance between competing service centers. A quantitative probability model has been developed in an effort to simulate the reported volume and geographic pattern of consumer trips. Fundamental to the model's concept is the consumer's desire to minimize travel cost and time and the specialized purpose of the trip. The interaction is replicated by considering various trip purposes and the relative accessibility of places providing facilities which can satisfy the consumer. (JEB)

76. FACTORS AFFECTING LARGE CITIES' MEETING OF FUNCTIONAL REQUIREMENTS

Main Investigators: Harry Bredemeier, and Elizabeth Clark.

Status of Research and Publications: Basic data collected; not yet coded or analyzed. Project will be continued during 1963-64.

Agency: Rutgers-The State University, Urban Studies Center.

Previous Digest Report: None.

Research Problem. Statistical indices of difficulties, mechanisms for coping with them, and degree of success achieved are being constructed for the four basic social system problems of adaptation, integration, pattern maintenance and decision-making for all cities over one million population. (HG)

77. THE RELATIONSHIP BETWEEN THE PROVISION OF LIBRARY SERVICES AND THE SOCIO-ECONOMIC STATUS OF COMMUNITIES

Main Investigators: Milbrey Jones and Mary V. Gaver.

Status of Research and Publications: Completed as a doctoral dissertation entitled, "Socio-Economic Factors and Library Service to Students" (Graduate School of Library Service, Rutgers-The State University). Available from the University of Michigan microfilm files.

Agency: Rutgers-The State University, Urban Studies Center and Graduate School of Library Service.

Previous Digest Report: None.

Research Problem. An investigation of the relationship between the quantity and quality of library services and the socio-economic status of the communities served. A comparative study of six New Jersey cities and towns. (HG)

78. APPLICATION OF INPUT-OUTPUT ANALYSIS TO THE REGIONAL ECONOMIES OF NEW JERSEY

Main Investigators: Ahmed Kooros and Norman Lindsey.

Status of Research and Publications: Statistical and survey analyses have been completed. Report (58 pp.) is in preparation.

Agency: Rutgers-The State University, Urban Studies Center.

Previous Digest Report: None.

Research Problem. The application of the input-output technique to regional economic analysis of the State of New Jersey. Utilizes the construction of matrices of the stock and flow coefficients in order to indicate those industries and economic activities which will have the greatest impact upon the economy of the state, and help in the forecasting of future economic activities. (HG)

79. A MEASUREMENT OF "SENSE OF COMMUNITY"

Main Investigators: Carol E. Leggitt, Robert Gutman, and David Popenoe.

Status of Research and Publications: Interviews to be conducted in 1963-64.

Agency: Rutgers-The State University, Urban Studies Center.

Previous Digest Report: None.

Research Problem. The task to be addressed by this research is that of isolating both theoretically and operationally the subjective

phenomena which is referred to as a "sense of community." that is, the individual's sentiments and feelings which relate to the local community in which he lives. It is hoped that it will be possible to test its variation within specific communities of similar size in New Jersey which differ by their degree of metropolitanization. Sense of community will be analyzed tentatively on the four dimensions of belonging, identification, communality, and commitment. It is felt that sense of community is complemented in the individual's orientation by the two categories of knowledge or information and judgment or evaluation. In the future, it is hoped that this measuring instrument can be applied in communities which differ according to functional interdependence (economic, political, and social) and physical distinctiveness (referred to as "imageability" by city planners). (HG)

80. MUNICIPAL POLITICS IN NEWARK

Main Investigators: Gerald Pomper and Alan Shank.

Status of Research and Publications: An article on "Ethnicity and Non-partisan Elections" has been prepared. An informal report on Newark Politics has been completed for office use.

Agency: Rutgers-The State University, Urban Studies Center.

Previous Digest Report: None.

Research Problem. A study of various aspects of local politics in the city of Newark, New Jersey. During the past year, particular attention has been devoted to the effect of the non-partisan electoral system on the politics of Newark, the influence of ethnic affiliations, and the role of political parties in municipal affairs.

Method of Study. An intensive study of the 1962 mayoralty and councilmanic election was undertaken. This involved statistical analyses, newspaper research and a series of interviews. In the next phase of this work, a detailed study of Negro leadership in Newark is being undertaken. (HG)

81. COSTS AND BENEFITS IN URBAN RENEWAL DECISION

Main Investigator: David Popper.

Status of Research and Publications: First stage completed (Ph.D. thesis, Department of Planning, University of Pennsylvania, 1963). Available from the University of Michigan microfilm files under the title, Costs and Benefits in Urban Renewal Decision: A

Study of the Theory of Rational Planning in the Public Sector.
Work is continuing (1963-64) on the development of a social cost-benefit analysis.

Agency: Rutgers-The State University, Urban Studies Center.

Previous Digest Report: None.

Research Problem. An investigation of the use of cost-benefit analysis in urban renewal, which includes a review of the economic approach, a critique of its limitations, and some suggestions for a more "rational-social" approach. The cost-benefit approach is elaborated in reference to the more general framework of the rational planning process. (HG)

82. THE PLANNER AS A POLITICAL ACTOR: A COMPARATIVE STUDY

Main Investigator: Francine Rabinovitz.

Status of Research and Publications: In process.

Agency: Rutgers-The State University, Urban Studies Center.

Previous Digest Report: None.

Research Problem. An analysis of the types of roles and environments associated with "effective" and "ineffective" planning in four communities and their relation to the influence of planners and the incidence of planning. (HG)

83. CHANGES IN MUNICIPAL EXPENDITURE PATTERNS AS A FUNCTION OF CHANGES IN POPULATION

Main Investigator: George Sternlieb.

Status of Research and Publications: The first dependent variable, expenditure on fire protection has been analyzed. To be completed in 1963.

Agency: Rutgers-The State University, Urban Studies Center.

Previous Digest Report: None.

Research Problem. This study takes up the common expenditure elements of the 50 largest U. S. cities.

Method of Study. Utilizes the STRAP program of the 1620 computer, and analyzes the interrelationship between them and a variety of independent

variables. The basic program has been checked out, and in order to insure validity, a theoretical model has been hand computed. (HG)

84. INTERNATIONAL BORDER PLANNING

Main Investigator: Martin S. Kermacy.

Status of Research and Publications: In process. Initial phase consists of support for Eagle Pass-Piedras Negras pilot project of San Antonio Chapter, A. I. A.

Agency: University of Texas, School of Architecture, in cooperation with Comité Internacional de Desarrollo Urbano Fronterizo, an international committee consisting of a Mexican delegation representing the Colegio y Sociedad de Arquitectos Mexicanos, and a U. S. delegation representing the American Institute of Architects.

Previous Digest Report: None.

Research Problem. To develop basic data illuminating the unique international planning problems of the border region as a whole, and in relation to this framework, to produce case studies based on the problems of specific U. S. - Mexico urban centers.

Method of Study. Physical planning and architectural studies exploratory rather than definitive in nature, emphasizing the larger implications of the data within the context of the region, and giving particular consideration to the unique problems presented by the intimate relationship of a U. S. and a Mexican city within one organic urban complex. (MSK)

85. PLANNING ASPECTS OF OUTDOOR RECREATION

Main Investigator: E. Mattyarouszky.

Status of Research and Publications: Research completed. Interim report in process.

Agency: University of Toronto, School of Architecture, Division of Town and Regional Planning.

Previous Digest Report: None.

Research Problem. Development of criteria to determine the selection of areas suitable for recreation, and then application in formulating solutions for recreational needs of major urban populations. While

Toronto is used for convenience as a case study, research is directed toward establishment of criteria of general applicability.

Major Findings. (1) Exceptional importance of the so called "water oriented" activities. Some problems connected with these activities are: selection of areas where the physical requirements for water are adequate; lack of standards for the recreational use of water, waterfront, etc.; and incompatibility of different water oriented recreational activities. (2) Growing importance of "wilderness areas." Canada's specific advantage in this field. (3) Need for establishing a guiding policy about the recreational use of "multiple use" areas. Need for legislative and administrative measures concerning: the arrangement of the status of parks and their jurisdiction; the role of different authorities; the importance and urgency of a coordinating authority; the regulation of the application of standards. (AJD)

86. HOME ASSOCIATIONS STUDY

Main Investigators: Byron R. Hanke, William C. Loring, and Jan Z. Krasnowiecki.

Status of Research and Publications: Field work and data analysis have been completed. Completion of manuscript scheduled for December, 1963. Publication as a Technical Bulletin planned for early 1964.

Agency: Urban Land Institute, under sponsorship of Federal Housing Administration, National Association of Home Builders, Office of Civil Defense, Public Health Service--HEW, Urban Renewal Administration and Veterans Administration.

Previous Digest Report: 10:1-76.

Research Problem. To study techniques of development and management of common areas and facilities by home owners associations; to determine what the problems are in creating and operating such properties and associations, and how they can be avoided or resolved; and to develop a practical guide for land developers, planners, builders, lenders, realtors, association officers, and government housing officials to use in determining what properties and facilities make for successful residential development and enduring values at lower costs.

Major Findings. Preliminary findings on the basis of field work and data analysis show remarkably high home owner satisfaction and enjoyment from the parks, recreation facilities, and other common properties owned and maintained at reasonable cost to the individual home owners. Such associations and their common facilities have a favorable effect on the marketability of homes within the developments. Serious problems seldom occur when the developments and associations have good land planning, sound

legal foundations, initial guidance and support by the developer, and a definite understanding, before sales start, of the rights and obligations of home owners. (GCT)

87. PRESENT AND POTENTIAL ROLE OF STATE AND LOCAL TAXATION IN PRESERVATION AND DEVELOPMENT OF OPEN LAND IN URBAN AREAS

Main Investigators: John E. Rickert and Roger R. Conant.

Status of Research and Publications: In process.

Agency: Urban Land Institute, under sponsorship of Housing and Home Finance Agency.

Previous Digest Report: None. See serial #85

Research Problem. Study will analyze effects of state and local taxes on retention of undeveloped land in the National Capital Region, with special emphasis on the rural-urban fringe areas of the region and open areas beyond the urban fringe zone, in Montgomery and Prince George Counties, Maryland, and in Fairfax, Loudoun and Prince William Counties, Virginia.

Method of Study. Will contain both theoretical and empirical elements, with major effort on the latter. (JPP)

88. THE EFFECTS OF TECHNOLOGICAL CHANGE ON CULTURAL CONTINUITY AS EVIDENCED BY THE MORPHOLOGY OF CERTAIN JAPANESE CITIES

Main Investigators: Thomas J. Norton and Myer R. Wolfe.

Status of Research and Publications: A bibliography in Japanese and Western languages has been prepared which relates to the first phase of the study. This material is primarily historical and deals with the morphology of the cities of Tokyo, Osaka, and Kyoto.

Agency: University of Washington, Center for Asian Arts, under sponsorship of Ford Foundation.

Previous Digest Report: 9:2-138. (TJN)

89. URBAN ECONOMICS, A GUIDE TO RESEARCH ON WASTE, POVERTY AND STAGNATION IN CITIES

Main Investigator: Wilbur R. Thompson.

Status of Research and Publications: Preliminary draft entitled A Preface to Urban Economics: Toward a Conceptual Framework for Study and Research (320 pp.) has been published by Resources for the Future, Inc., Washington, D. C.

Agency: Wayne University, Department of Economics, under sponsorship of Committee on Urban Economics, Resources for the Future, Inc.

Previous Digest Report: 9:2-140. (WRT)

90. URBAN KINSHIP NETWORKS

Main Investigators: Marvin B. Sussman and Sherwood B. Slater.

Status of Research and Publications: Data collection has been completed, preliminary analyses completed, and papers presented. Publication of journal articles planned. Copies available upon request.

Agency: Western Reserve University, Department of Sociology, under sponsorship of Vocational Rehabilitation Administration.

Previous Digest Report: None.

Research Problem. (1) To investigate the structure and functions of kinship networks of a stratified random sample of Metropolitan Cleveland households; (2) To compare the kinship networks of families with chronically ill and families without chronically ill members; (3) To estimate the normative form of kinship networks for Cleveland families; (4) To determine sources of variation in kinship networks.

Previous Relevant Research. Sussman's previous work in New Haven and Cleveland has served as a model for this currently expanded project in kinship networks.

Hypotheses. Numerous a priori hypotheses are tested. These are derived from consideration of the problems being investigated. The major hypothesis tested, and the basis for further conceptualizations, is that there exists in urban families a continuum of isolation-integration that can be used to categorize the structure and function of kinship networks.

Method of Study. A stratified random sample of 500 households, 100 in each of five metropolitan census tracts, were interviewed. Information was obtained about household composition, social and demographic characteristics, frequency and reasons for communication and the exchange of aid. Kin through first cousins were enumerated, geographical location and lineage was determined. Indexes of structural and functional integration are developed and data has been transferred to IBM cards for analysis and statistical testing.

Major Findings. Major findings to date support the hypothesis that there is in the Cleveland metropolitan area a network of integrated kin related families that are modally propinquitous, and engaged in communication and exchange of aid. Between 76 and 96% of the families are to some degree and in some manner integrated with their kin. Only 4 to 24% of the families can be considered as entirely isolated. This indicates that most urban families are involved in an operating kinship network.

Social class, race, education, occupation, age of head, and family life cycle as individual factors do not differentiate families according to degree of kinship network integration. Ethnicity, nativity and religion are factors which individually differentiate high and low propinquity of kinship networks; collectively the factors related to minority group status are associated with significantly higher propinquity of the networks. This is concluded to be a manifestation of the segregation and status of ethnic and religious minorities in the past. (SBS)

91. GEOGRAPHICAL MOBILITY OF WISCONSIN WORKERS

Main Investigator: Gerald G. Somers.

Status of Research and Publications: Two year project nearing completion; book to be published in Spring of 1964.

Agency: University of Wisconsin, Industrial Relations Research Center, under sponsorship of Wisconsin State Employment Service.

Previous Digest Report: None.

Research Problem. To determine the factors motivating geographic mobility of labor, the characteristics of mobile and non-mobile workers, the investment made by mobile workers in geographic movement, and the gains and costs involved in geographic movement.

Method of Study. The study involves the utilization of interview data on over 800 respondents in the Fox River Valley communities and 200 respondents who have moved into Madison and Milwaukee from distances of at least 50 miles in the last five years. The sample of Madison and Milwaukee in-migrants was selected on a random basis from the files of Wisconsin income tax returns. The study also has provided an opportunity for evaluation of income tax returns as a source of data on labor mobility, and comparison of data on income tax forms with interview survey responses has provided a basis for evaluation of survey response information. (GGS)

92. APPRAISAL OF TRAINING PROGRAMS IN DEPRESSED AREAS WITH ARA PROGRAMS

Main Investigator: Gerald G. Somers.

Status of Research and Publications: Two year project ending February 1, 1964; book to be published in Spring of 1964.

Agency: University of Wisconsin, Industrial Relations Research Center, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. To evaluate the effectiveness of recent and current retraining programs for unemployed workers, as a guide to policy formation in the expanded programs about to be initiated. The essential criteria by which these programs are to be judged are their success in placing workers in useful employment and their contribution to the reduction of unemployment in distressed economic areas.

Method of Study. Data are being gathered on all aspects of retraining programs in as wide a variety of environmental circumstances as possible. Over 1500 interviews have been conducted among unemployed workers in West Virginia and less intense surveys are proceeding in other parts of the country. Analysis of the interview returns has involved the use of about 20 coders and will also involve extensive computational service. (GGS)

93. DELINEATION AND STRUCTURE OF RENTAL HOUSING AREAS, 1960

Main Investigator: Herman G. Berkman.

Status of Research and Publications: Data processing being completed; publication is anticipated within the year.

Agency: University of Wisconsin, (Milwaukee), Graduate School.

Previous Digest Report: None.

Research Problem. Examination of census tracts in Milwaukee during the period 1940 through 1960 reveals a continuing pattern of relationship between physical characteristics of housing and population types. Indications are that families displaying certain characteristics filter through specific types of housing areas. These areas, known as the S-T-A-R types, are functional residential areas. The structure of these areas is related to families in various stages of their life cycle. (HGB)

94. APPLICATION OF AN INPUT-OUTPUT FRAMEWORK TO A COMMUNITY ECONOMIC SYSTEM

Main Investigators: Floyd K. Harmston and Richard E. Lund.

Status of Research and Publications: Preliminary draft being circulated for review.

Agency: University of Wyoming, Division of Economic and Business Research.

Previous Digest Report: None.

Research Problem. This report represents largely a compilation of the thinking and experience of the authors resulting from their work in applying a Leontief type static input-output model to small community systems. Some argument concerning the theoretical basis and advantages and disadvantages are included. Details for delineating industries and defining measurement units as well as data collection procedures are given. (REL)

95. STANDARDS FOR TRAVELER STUDIES

Main Investigator: Richard E. Lund.

Status of Research and Publications: Completed and published. Available from Western Council on Travel Research, P. O. Box 8066, Foothill Station, University of Utah, Salt Lake City, Utah.

Agency: University of Wyoming, Division of Economic and Business Research and University of Utah, Bureau of Economic and Business Research.

Previous Digest Report: None.

Research Problem. This publication is essentially a procedures and definitional manual for studying visitors to a prescribed area. (REL)

96. PERFORMANCE STANDARDS FOR SPACE AND SITE PLANNING FOR RESIDENTIAL DEVELOPMENT

Main Investigators: H. Peter Oberlander, W. G. Gerson, and Arthur Boyd.

Status of Research and Publications: Investigation into factors determining spacing of buildings is presently concerned with noise, as a characteristic of space control standards. Studies of fire spread by radiative heat transfer and of daylight adequacy are now complete. Other characteristics to be investigated include air, privacy, traffic and outdoor space.

Agency: University of British Columbia, School of Architecture and Graduate Program in Community and Regional Planning, under sponsorship of Division of Building Research, National Research Council, Ottawa.

Research Problem. To develop rational criteria based on the different environmental components of fire, air, noise, etc., so that reasonable and meaningful space standards might be determined and correlated in a performance system for evaluating spatial relationships existing between buildings.

Previous Relevant Research. An annotated bibliography of the subject literature was published by the sponsors in August, 1961. Following this a report entitled Performance Standards for Space and Site Planning for Residential Development was published in July, 1963. It contains the results of an investigation of development controls and advances and hypotheses for a proposed technique for residential space and site planning based on a performance standard system. The next report to be completed, entitled Space Between Buildings as a Means of Preventing the Spread of Fire, consists of an evaluation of selected residential areas according to data from recent basic research by the National Research Council, Division of Building Research. The last report to be completed, entitled Daylight as a Characteristic of Space Control Standards contains the results of a pilot study of daylighting conditions in a multiple family-dwelling area.

The pilot study assesses daylighting conditions by integrating a calculation and field measurement techniques with daylighting judgements of tenants.

Method of Study. The method of study has consisted of systematic investigation and evaluation of space and site planning criteria by the direct application of information to selected residential test areas. (HPO)

97. THE PLANETARY FOOD POTENTIAL

Main Investigator: Walter R. Schmitt.

Status of Research and Publications: Manuscript (25,000 words) completed, under consideration by publisher.

Agency: University of California, (San Diego), Institute of Marine Resources.

Previous Digest Report: None.

Research Problem. Are the natural resources of the earth sufficient to provide an adequate diet to a sharply increased world population? How could this generally be accomplished? What dietary contribution can we expect from the sea?

Method of Study. Search of the literature was combined with original research in an effort to gain perspectives on this complex problem. The

accuracy of many data and results is low, and better determinations will no doubt entail revisions. However, conclusions drawn from the study are believed to be essentially valid.

Hypotheses. The proposition is derived that the world population will eventually stabilize at between 15 and 60 billion, consequently the dietary requirements of 30 billion people are taken as a measure of the problem. Radiant energy is considered to be the irremedial natural condition which limits the potential productivity of the plants. A further condition derives from the investigation itself, namely that suggested remedial actions must make good economic sense.

Major Findings. The food problem is primarily a socio-economic problem. Improvements in this area must go hand in hand with the application of technical measures. The productivity potential of each major mode--agriculture, silviculture, aquaculture, and microbial culture--in terms of organic matter is greater than the requirements of 30 billion people. In agriculture an up to four-fold expansion of the acreage planted to food crops appears ecologically possible. But amount and quality of water and fertilizers, in particular phosphorus, generally limit food production before land does. Other measures to improve productivity are also discussed including the complementary relationship between them. In silviculture forests constitute huge sources of organic matter. They are nutritionally insignificant at present, but may yet be made to yield a digestible product. Moreover, agricultural land won from tropical rain forests could be highly productive once the difficult nutrient and access problems were resolved. In aquaculture, which offers the best hope for a protein hungry planet, the sea presently provides about five per cent of all dietary protein (or 15 per cent of its animal component). With improvement of juridicial and economic conditions, and the application of modern technology to the sea, this share could potentially increase to 33 per cent for 30 billion people. Fertilization, the by-passing of trophic levels, and other cultivation measures are discussed.

A very productive and resource efficient method of providing food-energy is available in hydroponics, the soilless culturing of crops; while up to 5000 lb/ac of consumable animal protein yearly could be produced from livestock feeding pens linked with algae cultured in sewage versus 150 lb/ac from fertilized fish ponds, 40 lb/ac from the sea off Peru, and 20 lb/ac from livestock in good pasture. But even this is topped by the productivity of certain microorganisms, e.g., 1/2 ton of yeast can potentially biosynthesize over 50 tons of protein in 24 hours.

Several other environments--salt marshes, swamps, polar and sub-polar regions, deserts and mountains, are examined for their food productivity potential. Lastly, the amounts and fluxes of the major substances essential to the production of organic matter--water, carbon dioxide, nitrogen, soils and nutrients, and sea water--are investigated. (WRS)

98. RESOURCES FROM THE SEA

Main Investigators: John D. Isaacs and Walter R. Schmitt.

Status of Research and Publications: Completed and published in "International Science and Technology" June, 1963.

Agency: University of California (San Diego), Scripps Institution of Oceanography, Marine Life Research Group.

Research Problem. Study focuses on marine resources of food, power, and minerals, but other resource aspects of the sea--waste disposal, transportation, military use, recreation, aesthetics, and scientific challenge--are also touched on.

Major Findings. Sea food landings in the world have doubled since World War II to some 40 million tons annually. The diets of many countries are critically dependent on these landings. This is not to say that the sea could provide significant amounts of man's food-energy requirements. These are adequately supplied by agriculture. Rather, sea-food is invaluable as a source of animal protein to a protein hungry world. The sea's net primary productivity of protein is estimated at approximately 2×10^{16} grams per year, the demand of animal protein by a future world population of, say, 30 billion is near 4×10^{14} grams per year. This indicates that we have no need to harvest the primary phytoplankton. Instead even a future 30 billion people could continue to exploit the concentrating action of the fishes.

The harvesting of such volumes of sea food is subject to many factors, technical and otherwise. Economical, juridicial, and natural factors control the use of modern gear and the distance to the fishing grounds. Taste determines which species are fished. We expect that in time legislation, both nationally and internationally, will be passed which will attract a variety of cultivation efforts to many parts of the oceans. Estuarine flats, reefal lagoons, and sections of the continental shelves will surely see the initial application.

The sea's power potential is untapped. The world's energy consumption shows a trend away from renewable energy (75% of total consumption in 1860) toward nonrenewable energy (80% of total consumption today). The renewable sources of energy--tidal, organic, and thermal--generally are small and difficult to harness. Only the thermal energy contained in the oceans possesses sufficient potential, measured on the power demand in 2000 A.D., to justify eventual large scale exploitation. But the nonrenewable sources of energy--fission energy of thorium and uranium and fusion energy of deuterium and hydrogen--represent a near inexhaustible reserve of power once the fusion process is tamed.

Two kinds of mineral reserves involve the sea: minerals dissolved or suspended in discrete concentrations in sea water, and minerals below the ocean floor. Salt, magnesium, and bromine are examples of the first kind, recovered in large scale evaporation basins. Manganese and phosphorite nodules, which precipitate in considerable amounts from the oceanic brine, also belong in this group. Of the second group, only petroleum and perhaps helium have thus far become economically important. (JDI and WRS)

99. ORGANIZATION FOR CITIZEN PARTICIPATION IN URBAN RENEWAL

Main Investigators: George S. Duggar and Clifford C. Ham.

Status of Research and Publications: Report completed; submitted for publication.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Department of Urban Affairs.

Previous Digest Report: None.

Research Problem. Devise a structure for citizen participation that promises to be more effective than a Mayor's Committee (as required under existing URA regulations). (CCH)

100. PRINCIPLES OF PHYSICAL PLANNING CONTRIBUTING TO THE REDUCTION OF VULNERABILITY FROM NUCLEAR ATTACK

Main Investigators: Clark D. Rogers and Robert Harding.

Status of Research and Publications: First report due January 1, 1964.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Department of Urban Affairs and the Department of Industrial Engineering, School of Engineering and Mines.

Previous Digest Report: None.

Research Problem. To identify the principles of physical planning which would tend to reduce the vulnerability of urban areas to nuclear attack. A very simple computer model will be developed to test patterns for vulnerability. (GSD)

101. LOCAL ORGANIZATION FOR URBAN RENEWAL

Main Investigator: George S. Duggar.

Status of Research and Publications: Continuing project.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Department of Urban Affairs, in cooperation with International Federation for Housing and Planning, Standing Committee on Urban Renewal, and International Union of Local Authorities.

Previous Digest Report: 3:1-29; 4:1-2; 7:1-1; 10:11-68.

Research Problem. The organizational element of "commitment," with "action" and authority postulated as one of the three elements of a civic enterprise, as well as of an organization, was further examined in the course of a Conference on the subject of "Functional Changes of Central Areas and General Objectives of Renewal or Conservation" (Rome, Italy 1, 2, 3 April 1963). The conference participants urged the "different meanings" of urban renewal between the United States and Europe, (Dr. G. A. Wissink) and among the regions of Europe (van der Hoff), thus tending to substantiate the contention, in this continuing research project, that value commitments be considered an element of the civic enterprise system, not merely as a determining factor in the external environment of the system. Accordingly, comparative study is needed among civic enterprises which share "an" objective, not "the" objective, and structures should be described in respect to differences in commitment patterns as well as action and authority patterns. Differences in action patterns were also emphasized, as expected, in contrasting references to renewal and restructuring operations in Rome, Milan, Venice and Genoa. (GSD)

102. BUILDING PERMIT INFORMATION SYSTEM

Main Investigators: C. D. Rogers and Jo Godley.

Status of Research and Publications: Report due January 1, 1964. Pilot study report submitted November 15, 1963.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Department of Urban Affairs.

Previous Digest Report: None.

Research Problem. Design an automated building permit system which will cululate with a multi purpose report providing information for various city departments.

Previous Relevant Research. Various staff studies prepared by Mr. Rogers and the personnel at Urban Data Center, University of Washington. (GSD)

103. BEHAVIOUR AND ATTITUDE IN A BIRACIAL MIDDLE INCOME HOUSING COMMUNITY:
THE LUDLOW STUDY

Main Investigators: Marvin B. Sussman and Eleanor K. Caplan.

Status of Research and Publications: This is a five year investigation which began in 1958. One doctoral dissertation, Attitude and Behaviour in a Middle Class Biracial Neighborhood: A Situational Approach to Relationship and Prediction, by Eleanor K. Caplan, was completed and submitted in 1962. Other findings to date are to be published in monograph form. Additional research is in process.

Agency: Western Reserve University, Department of Sociology.

Previous Digest Report: None.

Research Problem. To study systematically over a five year period the ecological, social-psychological, and sociological factors which effect residential mobility in a middle-class residential area during the process of racial invasion. Specific aims are: (1) to study rate of racial change; (2) to study the range and extent of white and Negro attitude toward living in a biracial neighborhood, and the factors associated with attitude; (3) to study how such factors as attitude and reference groups change during the five year period; and (4) to study factors associated with residential movement in and out of the neighborhood.

Method of Study. A random sample consisting of 167 single-family households was selected for interviewing in 1958. This sample comprises 39.9 per cent of the 419 single-family homes of Ludlow Elementary School District. The household units in the 1958 random sample were then used as a panel for interviews in 1959, 1960, 1961, and 1962. The interview schedule consisted of structured and unstructured questions.

Three types of analyses are used to study residential mobility. Each level necessitates a different design though the same data are used for all. These are (1) Descriptive. The rate of change, attitudes, and characteristics of the population are described at one year intervals and comparisons made from one year to the next. (2) Exploratory. Because knowledge is limited in the area of residential mobility, all possible relationships will be explored between independent variables, such as age, length of residence, etc., and the dependent variable of movement. This is an ex post facto design. (3) Longitudinal. By following individual changes over time, one can determine whether patterns of changes in such things as attitude and reference groups are associated with residential mobility.

Major Findings. (1) Rate of change shows an approximate ten per cent increase in Negro residents each year from 1955 to 1960 with a decrease down to 5.4 per cent in 1962. (2) The number of original white residents moving each year reached a peak in 1959 and dropped in 1960. The number moving in 1960, 1961 and 1962 remained constant. However, the percentage of white residents who move the following year shows gradual increase after the 1960 drop. (See Table 2.) (3) Using an ex post facto design, the major 1958 characteristic differentiating movers from nonmovers is attitude toward remaining in the neighborhood with Negroes. It is hypothesized from this finding that three subpopulations based on attitude are present in the neighborhood and that reasons for movement would be different for each group. (4) Many significant differences were found among the characteristics of the three subpopulation groups. The conclusion is that the three groups do differ and that reasons for movement or nonmovement must be studied within each group. Data on characteristics associated with movement within each group are now being analyzed. (EKC)

TABLE 1
PERCENTAGE DISTRIBUTION OF RACIAL COMPOSITION
OF LUDLOW SAMPLE BY YEAR AND
RATE OF CHANGE

Race	1958	1959	1960	1961	1962
TOTAL (167)	99.8%	99.8%	99.9%	100.0%	100.0%
White	74.8%	67.6%	58.1%	51.5%	46.1%
Negro	23.9	30.5	40.7	48.5	53.9
Vacant	1.1	1.7	1.1	0.0	0.0
Rate of Change	23.9%*	6.6%	10.2%	7.8%	5.4%

* Approximate change from 1955.

TABLE 2
RATE OF RESIDENTIAL MOVEMENT OF ORIGINAL WHITE RESIDENTS

Year	Number moving since previous year	Per cent of original white residents (N=167)	Per cent of white residents from previous year
1958	40*	23.9%	23.9%
1959	19	11.4	15.2
1960	13	7.8	11.5
1961	14	8.4	14.4
1962	15	9.0	17.4
TOTAL	101	60.5%	

* Approximate change from 1955 based on number of Negro residents in 1958.

104. A STUDY OF THE LINKAGE PATTERN BETWEEN A CENTRAL CITY AND THE COMMUNITIES
WITHIN ITS REGION OF INFLUENCE

Main Investigators: George W. Greenwood, Aly M. Shady, and George T. Marcou.

Status of Research and Publications: One report entitled, "A Survey of the Literature on Inter-Community Traffic," has been published as part of the Highway Research Board Bulletin 347, Trip Characteristics and Traffic Assignment. The research project final report is presently being edited for anticipated publication by the University of Illinois Engineering Experiment Station.

Agency: University of Illinois, Bureau of Community Planning and Engineering Experiment Station, under sponsorship of Highway Research Board.

Previous Digest Report: 8:2-20.

Research Problem. The goal of this research project is to develop inter-community traffic models which will make possible the estimation of inter-community traffic in the aggregate and also by individual trip purposes. These models are to be developed from relationships between travel data between Champaign-Urbana and other communities in East Central Illinois and data pertaining to such characteristics as the population, employment, motor vehicle registration, retail sales, etc., of the communities linked with Champaign-Urbana.

Method of Study. Regional travel patterns for East Central Illinois were examined utilizing motor vehicle travel data obtained from the external interview portion of a comprehensive origin-destination study conducted in Champaign-Urbana in 1958. A theory of inter-community competition was then hypothesized and developed conceptually. This analytical framework was founded on the basic tenets of the gravity concept of human interaction.

Inter-community traffic estimation models were empirically developed for work, business, work and business (combined), shopping, pleasure, school, and medical purpose trips and for a total trips or all trip purposes category. Regression analysis was the principal model building technique employed although factor analyses was applied also in the case of the total trips category as an additional test of the validity of the inter-community competition concepts.

Major Findings. (1) The 14 county analysis area proved to be a satisfactory analytical unit for developing inter-community traffic models. (2) Stratification of trips by purpose achieves greater homogeneity in the data as well as providing flexibility in the selection of community indices to measure the effects of internal competition. (3) Attracted and produced trips are functionally different groups and should be separately estimated. (4) Division of the total analysis region into core and fringe areas provides greater homogeneity in the data and in the effect of inter-community competition, and it allows more flexibility in selection of the most appropriate variables and their transformations by means of which to predict a particular type of functional behavior. These consequences contribute toward models providing improved explanation of the relationship between the independent variables and inter-community traffic. (5) The impact of distance (travel time) on the generation of inter-community traffic varies among trip purposes, between the trips produced and trips attracted categories, and between the core and fringe areas of the analysis region. (6) Multivariate techniques, regression analysis and factor analysis, show comparable results which support the inter-community concept hypothesized in the study.

More specific findings together with overall conclusions and recommendations for further research will be included in the project final report.

BRIEF MENTION

NEW URBAN AND REGIONAL RESEARCH AND TRAINING PROGRAMS

University of Connecticut

An Institute of Urban Research, designed to facilitate research undertakings in the urban field by existing faculty, has been established by the University of Connecticut. Director of the Institute is William N. Kinnard, Jr. According to Professor Kinnard, the Institute will serve as a clearing house for information about research grant funds; develop an inventory of information about the abilities and interests of staff members; sponsor a series of colloquia on urban research activities and developments, particularly in the state of Connecticut; and administer such grants or contracts as may become available for interdepartmental studies.

New York University (a)

Beginning with the fall of 1963, NYU's new planning program will lead to the degree of Master of Planning. Two years in residence are necessary; 54 points of course work with an average grade of B, and a thesis are required.

The curriculum encourages analytical knowledge of population, the family, social groups and forces, social legislation, employment and income generation, economic and locational analysis, fiscal policy, political and government organization and administration, public finance, and the law. At the same time it provides the theory of planning, analytical and survey techniques, including presentation and design techniques, and courses on implementation. Planning elements, concepts, standards, goals, and methods are presented so as to enable sound synthesis. The core of the program is the Workshop in Planning Design, in which the student's acquaintance with the professional tools of planning is developed in conjunction with knowledge obtained in his other courses through the analysis and solution of specific planning problems.

In addition to the required courses and accepted equivalents, each candidate shall select such additional courses in consultation with his advisor as shall complement his previous training and experience insofar as his professional planning career is concerned. A knowledge of the fundamentals of statistics must be demonstrated. Satisfactory completion of an approved course will fulfill this requirement or the student may stand a special examination.

(a) From Bulletin of the Association of Collegiate Schools of Planning, Summer, 1963.

University of Pittsburgh (b)

A program of studies leading to the degree of Master of Urban and Regional Planning became available at the University of Pittsburgh beginning in September, 1963. It is being inaugurated at this time primarily for two reasons: (1) to serve some of those who first enrolled in the urban renewal curriculum but wish to take the M.U.R.P. degree instead of the M.P.A., and (2) to serve part-time, employed persons living within reasonable commuting distance. Scheduling of classes during the first few years of the program is being arranged with special consideration for the latter group.

Relevant practical experience of at least three months is a requirement for the degree. Full-time students will normally complete the course requirements and thesis in four trimesters, or 20 months. Part-time students who take two courses each trimester can complete the course work, short of thesis, in 28 months. The program emphasizes professional planning practices and skills, with enrichment by study of the two intellectual streams which provide the primary sources for urban planning: knowledge of the process of urban change, and knowledge of the processes of decision and control.

Central feature of the program is the sequence of four trimester courses in professional planning practices: Theory and Practice of Urban Planning, Planning Land Use and Transportation, Planning Facilities and Services, and the preparation of the Urban General Plan.

To develop knowledge of the process of urban change and the process of decision and control two additional sequences of courses are provided, one within the Urban Affairs Department and one based on the general academic resources of the School, University and community. The sequence within the Urban Affairs Department includes Urban Analysis, Urban Renewal Survey, and Urban Development Law.

Through the School's Core Courses and through electives the student of planning can study the common ground between planning theory and the theory of communication, decision, and control. He can also register in courses in other schools to pursue such studies and for relevant course work on urban change and on other urban professional practice.

San Diego State College (c)

Admission of first students in the fall of 1964 will mark the culmination of efforts to establish a planning program at San Diego State

(b) From Bulletin of the Association of Collegiate Schools of Planning, Summer, 1963.

(c) From Bulletin of the Association of Collegiate Schools of Planning, Summer, 1963.

College, California. The curriculum will be developed from existing courses in six different departments, and will require the establishment of eight new courses--six in planning, and one each in political science (planning law and administration) and economics (local and regional economics). It will thus be a broadly based curriculum, with specialization achieved through the choice of electives, the thesis topic, and orientation of workshop projects.

It is intended that for the first several years the planning program be "housed" in the Department of Political Science, whose chairman, Dr. Richard Bigger, will be its administrative head. Direct responsibilities for program initiation, however, will rest with an "administrator"--a political science faculty member--until the hiring of the first planning instructor. After this period a review of the progress of the program will indicate the appropriateness of establishing a separate Department of Urban Planning. The program would consist of 56 semester units, of which 29 would be in planning courses (including a 6-unit thesis) six each in geography, economics, and political science, three in sociology, and six units of electives. A planning internship is required, desirably in the summer between the two years of academic work.

University of Toronto (d)

Beginning in the fall of 1963 a new two year planning program is being offered in the Division of Town and Regional Planning at the University of Toronto leading to the degree of Master of Science in Urban and Regional Planning.

The Division has been offering a Diploma in Town and Regional Planning for over a decade. This is a one-year graduate course and students who perform satisfactorily in it may be given credit for the first year of the two-year Master's course. It is anticipated that many students who have been awarded the Diploma during the past 10 years will return for the second year.

The new degree course covers such subjects as theory I and II of planning, engineering, local government, law, land economics, housing and sociology, urban geography, statistics and method, history and transportation. Project work is carried on simultaneously during both years and includes subdivisional layout, the preparation of master plans and their written documents, urban design, and regional studies and advisory proposals.

The courses are directed by Dr. A. J. Dakin, Professor of Planning and Head of the Division.

University of Wisconsin-Milwaukee (e)

The University of Wisconsin-Milwaukee has established a new graduate Department of Urban Affairs in its College of Letters and Science. The one-year

(d) From Bulletin of the Association of Collegiate Schools of Planning, Autumn, 1963.

(e) From ASPO Newsletter, April, 1963.

program, which leads to a Master's Degree in Urban Affairs, consists of five core seminars and electives for concentration in specialties such as urban economics, housing and redevelopment, public administration, community organization, social welfare, and transportation. Further information on the program, which began this fall can be obtained from Henry Schmandt, Chairman.

Regional Science Association, Summer Training Institute

A summer training institute in regional science, designed primarily for college teachers in the social sciences, will be held during the summer of 1964 on the Berkeley Campus of the University of California, under the joint sponsorship of the Regional Science Association, the National Science Foundation, and the Center for Research in Real Estate and Urban Economics of the University. Dates for the conference are June 14 through July 24. Stipends of \$450, plus \$90 for each dependent, are available. Applications must be received by February 21. Further information may be obtained from Professor Duane F. Marble, Department of Geography, Northwestern University, Evanston, Illinois.

Conference on Recent Advances in the Statistical Analysis of Spatial Distributions

A summer conference on recent advances in the statistical analysis of spatial distributions will be offered for college and university teachers of geography from August 16, 1964 through August 29, 1964, at Northwestern University in cooperation with the National Science Foundation. Stipends for living expenses will be awarded to each of the participants; modest travel grants will also be available.

The Conference will review recent work in the areas of contiguity problems, aggregation and autocorrelation in spatial series, and studies of the structure and identification of two-dimensional point and line distributions.

Applications must be postmarked on or before March 15, 1964. Notification of stipend grants will be mailed on about April 1, 1964, and recipients will have until May 1 to accept or decline the awards. All inquiries about the Conference should be addressed to: Dr. Duane F. Marble (SSC), Department of Geography, Northwestern University, Evanston, Illinois, 60201.

RESEARCH MATERIALS

"Statistical Services of the U. S. Government" Revised (f)

The Office of Statistical Standards, Bureau of the Budget, has issued the 1963 revised edition of Statistical Services of the United

(f) From Federal Statistical Reporter, August 1963, No. 308.

States Government. Copies (\$1.00 each) are now available from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

In the revision, Part I is a description of the statistical system of the United States Government and Part II presents brief descriptions of the principal economic and social statistical series collected by government agencies. Part III, Principal Statistical Publications of Federal Agencies, includes what was formerly the appendixes--a statement of the statistical responsibilities and a listing of the principal statistical publications of each agency. The chart, The Federal Statistical System, is included as an insert.

Federal Statistical Directory, 1963

The Federal Statistical Directory, 1963, lists 3,800 persons in Federal agencies who are engaged on statistical programs. Their activities include planning statistical programs, clearing reporting forms under the Federal Reports Act, data collection and data processing, publishing statistical information, research on social and economic problems, and applying statistical methods to Government operations. The Directory is designed to be a guide to these activities and to facilitate communication with offices concerned with statistical programs.

The basic listing shows the agency structure of the statistical activity and gives, for each individual, his functional title, telephone number and room location. A name index lists everyone shown in alphabetic order.

The present publication is the nineteenth edition of this Directory, the first having been issued in 1935. It is also compiled by the Office of Statistical Standards, Bureau of the Budget from lists prepared by the agencies involved, and is available at 55 cents per copy from the Superintendent of Public Documents.

New Materials, U. S. Bureau of the Census

State and Local Tax Revenue (g) A new series of reports entitled "Quarterly Summary of State and Local Tax Revenue" will be introduced shortly by the Bureau of the Census. The initial quarterly summary, covering the first quarter of 1963, will appear in August, following publication of a background report that will furnish quarterly data for the calendar year 1962.

(g) From Federal Statistical Reporter, July 1963. No. 307.

Tax revenue for the current and prior periods will be presented as estimated nationwide totals by level of government and type of tax, as state-by-state data for several major types of state taxes, and as figures on property tax collections for each of the 123 county areas that had at least 250,000 inhabitants in 1960.

These data are based primarily upon quarterly mail surveys which cover the tax administering agencies of all state governments, a limited group of major local units having major nonproperty taxes, and the local agencies responsible for property tax collection in each of a stratified random sample of approximately 500 county areas.

Property Tax Base (h) "Taxable Property Values" (Volume II of the 1962 Census of Governments) was recently issued by the Bureau of the Census. While the presentation generally resembles that of the corresponding report of the 1957 Census of Government, it includes some additional kinds of data.

The report provides statistics on assessed valuations by major class of taxable property (state-assessed, locally assessed realty, and locally assessed personalty) by state and county and for individual cities of over 300,000. It gives further detail on locally assessed real estate in each state in estimated distributions of the number and assessed value of such property by value-size and use-class (residential, commercial, and industrial property, acreage and farms, and vacant lots), with some related distributions for several hundred major counties.

The report also presents, by states, the number of measurable sales, assessed value, sales price, and indicated average assessment ratios for various use-classes of property, using data collected in a sample survey of real estate sales completed during the latter half of 1961. Related figures regarding sales of single-family houses are shown for about 500 local assessing areas (mainly counties) having 50,000 or more inhabitants, and for individual cities of over 300,000.

"Taxable Property Values" (160 pages, \$1.00 per copy) may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

(h) From Federal Statistical Reporter, August 1963, No. 308.

Senior Citizens (i) Special tabulations of data on senior citizens for places with populations of 10,000 to 100,000 in approximately 35 states will be available in mid-October from the Bureau of the Census. These tabulations, based on data from the 1960 Censuses of Population and Housing, were sponsored by the Housing and Home Finance Agency and a number of local housing authorities.

Data will be presented on tenure, number of persons in unit, number of persons 60 and over in unit, year structure was built, year household head moved into unit, gross rent, and rent-income ratio. In addition to these housing subjects, such population characteristics as age, relation to head of household, household composition, and individual and household income will be included.

Photocopies of the tabulations will be available from the Housing Division, Bureau of the Census, Washington, D. C. 20233, at a cost of \$6 for each place.

The Bureau announced the availability of additional tabulations on senior citizens last year (SR No. 293, May '62, p. 62). These tabulations presented data for the United States as a whole, for each state, 212 standard metropolitan statistical areas, and all places of 100,000 inhabitants or more.

Rural Housing (j) Publication of "Rural Housing," Volume VI of the 1960 Census of Housing, by the Bureau of the Census makes available data on the characteristics of occupied rural-nonfarm and rural-farm housing units separately, by economic subregion.

Five of the tables present cross-tabulations for selected characteristics by number of rooms, tenure, rent status, condition and plumbing, income, and year structure built for each of the 121 economic subregions of the United States.

A sixth table is a cross-tabulation of data, by condition and plumbing, for units occupied by nonwhite owners, and a corresponding cross-tabulation of nonwhite renter units. This table is for the United States and for each of the 31 subregions in which there are 10,000 or more units with nonwhite household heads.

The remaining table provides data on selected characteristics of vacant rural nonfarm units.

(i) From Federal Statistical Reporter, September 1963, No. 309.

(j) From Federal Statistical Reporter, June 1963, No. 306.

Copies of Rural Housing (800 pages, \$6.00) may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Subject Reports, 1960 Population Census (k) Publication of seven additional "Subject Reports," Series PC(2), of the 1960 Census of Population, has been announced. The new reports are: PC(2)-1B Persons of Spanish Surname (\$1.50), PC(2)-1C Nonwhite Population by Race (\$1.75), PC(2)-1D Puerto Ricans in the United States (70 cents), PC(2)-2B Mobility for States and State Economic Areas (\$3.00), PC(2)-2C Mobility for Metropolitan Areas (\$2.25), PC(2)-5B Educational Attainment (\$1.25), PC(2)-6A Employment Status and Work Experience (\$1.75).

Announcements which provide descriptions of all PC(2) reports are available upon request to the Publications Distribution Section, Bureau of the Census, Washington, D. C. 20233, or by telephoning (Government through-dialing) 157-406.

Copies of the reports may be purchased from Superintendent of Documents, Government Printing Office, Washington, D. C. 20402.

Publications of National Center for Health Statistics (1)

The National Center for Health Statistics, Public Health Service, HEW, has revised its publication program and combined a number of series under the heading of Vital and Health Statistics (Public Health Service, Publication Number 1000). Its eleven series will include all of the Center's principal statistical publications except "Vital Statistics of the United States" (the annual vital statistics volumes) and the "Monthly Vital Statistics Report." Thus, the series will supersede "Health Statistics from the U. S. National Health Survey" and "Vital Statistics--Special Reports." The National Vital Statistics Division will continue to issue separately certain items from "Vital Statistics of the United States," and will maintain a mailing list or lists for their distribution. Separate mailing lists will be maintained for each of the series described below except that Series 1 will be sent to everyone on a Vital and Health Statistics mailing list. The new publication will include the following types of reports:

General Series Series 1. Programs, definitions, procedures.-- Reports which describe the general programs of the National Center for Health Statistics and its offices and divisions, data collection methods used, definitions, and other material necessary for understanding the technical characteristics of published data. Series 2. Research in

(k) From Federal Statistical Reporter, October 1963, No. 310.

(1) From Federal Statistical Reporter, April 1963, No. 304.

statistical methodology.--Studies of new statistical methodology including: experimental tests of new survey methods, studies of vital statistics collection methods, new analytical techniques, objective evaluations of reliability of collected data, contributions to statistical theory.

Series 3. Analytical Studies.--This series comprises reports presenting analytical or interpretive studies based on vital and health statistics. The primary aim of these reports will not be to publish new tabulations of data, but to carry the analysis of data further than the expository type analyses given in other series. The series is not limited with regard to the type of statistical analysis to be covered. Series 4. Committee reports and documents.--Final reports of major committees concerned with vital and health statistics. Documents such as recommended model vital registration laws and revised birth and death certificates will be published in this series. Committee working papers and reports of limited or temporary interest will not be included. (Series 5 through 9 reserved for future use.)

Health Survey Series Series 10. Health Interview Survey statistics.--Statistics on illness, accidental injuries, disability, use of hospital, medical, dental, and other services, and other health-related topics, based on data collected in a continuing national household interview survey. Series 11. Health Examination Survey statistics.--Data from the direct examination, testing, and measurement of national samples of the population of the United States, including the medically defined prevalence of specific diseases, and distributions of the population with respect to various physical and physiological measurements. Series 12. Health Records Survey statistics.--Reports on the health characteristics of persons in institutions, and on hospital, medical nursing, and personal care received, based on national samples of establishments providing these services and samples of the residents or patients, or of records of the establishments. (Series 13 through 19 reserved for future use.)

Vital Statistics Series Series 20. Mortality data.--Various special reports on mortality giving data other than that in the annual volume Vital Statistics of the United States or in the Monthly Vital Statistics Report--tabulations by cause of death, age, etc., time series of rates, data for geographic areas, states, cities, etc. Series 21. Natality data.--Data on birth by age of mother, birth order, geographic areas, state, cities, time series of rates, etc.--compilations of data not included in the regular annual volumes or monthly reports. Series 22. Marriage and divorce statistics.--Tabulations of data on marriage and divorce by various demographic factors, geographic areas, etc. Series 23. Data from vital statistics surveys.--This series will include tabulations based on a special program of sample surveys related to vital records. The subjects being covered in these surveys are varied, including such topics as mortality by socioeconomic classes, hospitalization in the last year of life, X-ray exposure during pregnancy, etc.

Reports in each series will be issued when ready, and not on a periodic basis. Reports in some of these series will be appearing soon, but other series will not be started until later. The frequency with which reports will be issued in each series will vary.

Atlas on U. S. Military Contracts

An Atlas on Military Contracts in the United States has been prepared by Walter Isard and Gerald J. Karaska, of the Department of Regional Science, Wharton School, University of Pennsylvania and can be obtained at 25¢ per copy from World Friends Research Center, Inc., GPO Box 7376, Philadelphia 1, Pennsylvania. The Atlas deals with prime contract data for the period 1960 through 1962, and aims to present in a concise and easily perceived form some of the important data on the geographic distribution of military and related expenditures. Purpose of the Atlas is to make possible intelligent discussion and public debate on policy issues pertaining to the local employment impact of military expenditures, and to assist counties and metropolitan areas in planning for possible changes in the level and composition of such expenditures. Previous volumes in this series include (1) Awards of Prime Military Contracts by County, State, and Metropolitan Area of the United States, Fiscal Year 1960, and (2) Unclassified Defense Contracts: Awards by County, State and Metropolitan Area of the United States, Fiscal Year 1962.

Conference on Regional Data Needs

Regional data needs and availability was the subject of a one day conference held in Washington, D. C. early in October, under the joint sponsorship of the Federal Statistics Users' Conference and the Committee on Regional Accounts. Purpose was to examine the regional economic information (county, metropolitan area, economic area, state, and multi-state regions) currently available from Federal, state and local governments, and from private agencies; to evaluate its usefulness in terms of present-day needs; and to seek a consensus as to the most urgent needs for improvement to help guide the course of future regional statistical programs. A summary of the proceedings, showing areas of consensus and areas of importance but on which there is no consensus, is to be prepared. Address of the Federal Statistics Users' Conference is 1420 New York Avenue, N. W., Washington 5, D. C.

BIBLIOGRAPHIES

Housing for the Aged

A new bibliography, Housing for the Aged: A Reading List for Architects, has been issued by the Library, Office of the Administrator,

Housing and Home Finance Agency. Covering such fields as background of the housing situation, housing needs and preferences, health and related problems, institutional care, architecture, private financing, and governmental programs, the bibliography lists some 120 items, together with a number of periodicals and publishers for further reference.

Urban Real Estate Research

Urban Real Estate Research - 1962, edited by Jerome P. Pickard and Arlene G. Balaban, has just been issued as Research Monograph No. 9 by the Urban Land Institute, 1200 18th Street N. W., Washington, D. C. This is the fourth in the series of annual research inventories bringing up to date the first survey prepared by David Rowlands in 1959. Altogether, the five volumes now in print span the period 1946-1962, and cover significant work completed or in process on physical, economic and social aspects of urban land use. A feature of the latest volume is a rearrangement of the section covering work in process, together with a cross-referencing where applicable to more detailed project statements which have appeared in the Research Digest.

Water Resources

A recent bibliography dealing with water resources is An Annotated Bibliography on Water Problems, by Richard D. Duke and Paul Nickel. (Michigan State University, Institute for Community Development. Technical Bulletin B-29. July, 1962.) Approximately 100 items are listed, arranged according to policy and administration, organization, research, basin planning, economic analysis, land planning, legal aspects, and other bibliographies.

HOUSING

Ford Foundation Grants for Gray Area Studies (m)

Since our previous issue, the Ford Foundation has provided two additional grants, its third and fourth, for "gray area" studies. A grant of \$1.7 million was given to the Philadelphia Council for Community Advancement to finance study and work on ways of solving social problems in Philadelphia. The council, a nonprofit corporation, was established to consolidate the efforts of various interested groups. North Philadelphia has been chosen as the primary target area for a demonstration project, because of the density of its population (largely Negro) and its great need for improvement. The over-all study, however, will be designed to benefit all Philadelphia.

(m) From ASPO Newsletter, May and November, 1963.

A \$1.9 million grant has been given by the Ford Foundation to Action for Boston Community Development, a nonprofit organization, to help solve social problems caused by the Boston slums. The money will finance a five-year program. Previous grants went to Oakland, California and New Haven, Connecticut.

HHFA Grants for Experiments in Low-Income Housing (n)

Boston, New York and San Francisco are each the recipient of an HHFA grant for developing new and improved means of providing low-income citizens with housing.

The Boston grant (\$52,800) is for a study of how best to relocate low-income workers to suburban areas. The money goes to Fair Housing, Inc., organized in 1962.

Fair Housing will provide, without charge to carefully selected families counseling and advice on buying and renting low-cost homes in suburban areas. Noting the trend in industry to relocate from center city to the suburbs, the study will attempt to find the best method of bringing low-income workers close to their jobs.

The New York City Housing Authority will organize a program for converting old but structurally sound buildings into housing for large, low-income families. The program calls for the conversion of the top two floors of existing buildings into 8- or 9-room duplex apartments that will house families of ten or more.

The Authority hopes that by using existing buildings, it will be able to reduce costs by 35 per cent. To develop this program the Authority has received a grant of \$764,351. The demonstration will be carried out over 18 months and evaluation of the program will be made by a New York university.

The San Francisco program will aid low-income families who show promise of earning more in the future. Sixty families in this category who have been displaced by urban renewal will be relocated into three middle-income cooperative and condominium developments. There they will pay rents based on their income with the federal grant making up the difference.

The subsidy will continue for no more than four years and, if all goes well, it is hoped that they will by this time be able to purchase the unit in which they have lived. The test families will be mixed with

(n) From ASPO Newsletter, September, 1963.

middle-income families without distinction, and during the rental period they will be prepared for home ownership.

The San Francisco Development Fund, a newly formed nonprofit corporation which sponsors welfare programs in connection with urban renewal, will use the \$244,607 grant to conduct the program. The results will be evaluated by two university groups and the local Community Fund.

Philadelphia, Washington, D. C., Glassboro, New Jersey, the University of Florida, and Michigan City, Indiana also received grants for low-income demonstrations. The Philadelphia grant, like the one given to New York, is for an evaluation of the feasibility of using existing structures in a low-income housing program. The Washington grant was given to a District of Columbia nonprofit organization which will provide technical assistance and service to sponsors of private, low-income housing.

The Borough of Glassboro, New Jersey will use its federal grant to test a method of reducing monthly payments on new homes purchased by families who now own their own homes but are being displaced by urban renewal. The University of Florida will carry out a demonstration for testing procedures for determining the credit acceptability of low-income applicants for FHA-insured mortgage loans. Michigan City, Indiana receives a grant for design and demonstration of the "stacking" of factory-built dwellings to achieve low-density, multi-level housing for low-income families.

TRANSPORTATION

HHFA Mass Transportation Demonstration Studies (o)

The use of the digital computer in scheduling bus operations will be tested under another in the series of mass transportation grants approved by HHFA. Purpose of the demonstration is to determine whether the expense of using a computer, instead of manual calculations, would yield sufficient advantage in terms of service, schedule improvements and economies in operation and supervision. The test will be conducted by Kansas State University's Engineering Experiment Station with at least four public transportation systems participating in the program--Kansas City Transit, Inc., Cincinnati Transit Company, St. Louis Public Service Company, and one or two others yet to be announced. The project, expected to cost \$18,705, will be divided into three stages covering a period of 15 months.

Another HHFA demonstration grant (\$291,667) was approved for study of current and future public transportation needs in southeastern Pennsylvania.

(o) From ASPO Newsletter, September, 1963.

The funds will be used by the Southeastern Pennsylvania Transportation Compact (SEPACT) which will contribute \$145,833 to the three-year study.

Other HHFA demonstration grants in transportation: Detroit (\$224,400), supplemented by \$112,200 in local funds to study the effects of more frequent transit service; the Tri-State Transportation Committee of New York, New Jersey and Connecticut (\$1,299,087), for a demonstration of the effects of faster schedules, more frequent service and expanded parking facilities on commuter rail systems; New York City (\$3,185,000), for two-thirds of the cost of studying the improvement of existing transportation in the five boroughs; New York State (\$99,160), added to \$49,580 in state money to show to what extent people in the "outer ring" will switch from cars to rapid transit if frequency and speed of service are increased; Metropolitan Government of Nashville and Davidson County, Tennessee (\$400,000), with \$200,000 in local funds to determine the economic feasibility of new mass transportation service; San Francisco Bay Area Rapid Transit District (\$4,886,000), to pay two-thirds of the cost of a test system for studying new concepts in rapid transit design, construction and operation.

OTHER

Public Control of Private Land Use (p)

The Ford Foundation has announced a grant of \$500,000 to the American Law Institute for a series of studies and monographs on the public control of private land use. The studies are planned to examine the basic economic and social aspects of land use control as well as the legal aspects, with a view to making a fundamental re-evaluation of presently held doctrine in the field.

The project will be under the general supervision of an Advisory Committee, with Richard F. Babcock of Chicago serving as chairman. The monographs and studies will be prepared by reporters. Experts and advisors from the fields of law, planning, architecture, housing, health, and public administration will be drawn into the study.

A workshop on land use control problems, sponsored by the American Society of Planning Officials in February 1960, and Mr. Babcock's 1962 study of zoning under a Ford Foundation grant to ASPO laid the groundwork for the new grant.

Current Work Program, Advisory Commission on Intergovernmental Relations

As of August 1, 1963, the current work program of the Advisory Commission on Intergovernmental Relations (Washington, D. C. 20575),

(p) From ASPO Newsletter, May, 1963.

included the following subjects:

Taxation and Finance. (1) Cooperative Tax Administration (Continuing Project) Note: Reports on Federal-State cooperation with respect to cigarette taxes and documentary transfer taxes are under preparation. (2) Effect of Tax and Expenditure Practices on Location of Industry and Economic Development. (3) Role of Equalization of Needs and Resources in the Structure and Operation of Federal Grants-in-Aid.

Metropolitan Areas. (1) Performance of Urban Functions: Local and Areawide Note: Final editing of the draft report on this subject is being completed for consideration by the Commission at its next meeting. (2) Intergovernmental Problems Arising from Economic and Racial Disparities Between Central City and Suburban Populations. (3) Jurisdictional Disparities Between Costs and Benefits of Local Government Programs in Metropolitan Areas. (4) Intergovernmental Problems in Relocation of Displaced Persons and Businesses in Urban Areas.

Other Aspects of Intergovernmental Relations. (1) Statutory and Administrative Controls Associated with Federal Grants for Public Assistance. (2) State Laws and Criteria for Formation of Special Purpose Districts and Authorities.

Follow-up Study of ARA Trainees in Six States (q)

The United States Employment Service, U. S. Department of Labor, and several affiliated State Employment Services are undertaking a follow-up study of ARA trainees in six states--Rhode Island, Pennsylvania, West Virginia, Wisconsin, Michigan, and Indiana. A sample of approximately 600 trainees (as well as their employers and instructors) will be surveyed, about 50 to 150 trainees in each of the six participating states. The major occupations to be covered are clerk-typist, clerk-stenographer, auto mechanic, and machine tool operator. In addition to the trainees, the survey will cover a small sample of about 300 unemployed workers who are as nearly comparable as possible to the ARA trainees with respect to such variables as age, sex, educational attainment, duration of unemployment, and prior occupational and industry attachment.

The purpose of this project is to determine the extent to which workers are in an improved labor market position as a result of their ARA training and whether the improvement is continuing, and to identify the factors conducive to the success or failure of the program. All data will be obtained from Employment Service records and by personal interviews conducted by university researchers and State Employment Service staff. Each employer and instructor will be interviewed once. Each

(q) From Federal Statistical Reporter, July 1963, No. 307.

trainee will be interviewed at two-month intervals over a period of one year. Information will be obtained in the initial interview on the trainee's personal characteristics and educational and vocational background. Subsequent interviews will maintain a complete post training labor force record. After an orientation meeting of participating State Employment Service and college staff, the interviewing phase of the study will begin. It is expected that this phase of the study will be completed by the fall of 1964.

Preliminary analysis of the data will be made at the state level; final analysis and presentation will be made by national office staff.

Study of Residence and Migration of College Students (r)

The Office of Education, Department of Health, Education, and Welfare, will conduct a survey on the residence and migration of college students in fall 1963. The questionnaire will be sent to the approximately 2,100 institutions which offer work creditable to a bachelor's degree. The survey will provide national data on the extent of student migration for purposes of college study; in-migration and out-migration for each state will be shown.

Migration as here defined means having a permanent address on the college record in a state other than that in which the college is located. The most recent survey of college student migration was done by the American Association of Collegiate Registrars and Admissions Officers in fall 1958, and the Office of Education conducted one in 1949-50. The present survey will show the current trend in migration patterns in comparison with the results of previous surveys.

A preliminary report is expected by April 1964 and the final report by December 1964.

AVAILABLE BACK ISSUES OF RESEARCH DIGEST

A few copies of the following back issues of the Research Digest are still available, and may be purchased at the regular price of \$1.00 per copy.

Vol. 3	No. 2	November, 1956
Vol. 5	No. 2	November, 1958
Vol. 7	No. 2	November, 1960
Vol. 8	No. 2	November, 1961
Vol. 9	No. 1	April, 1962
Vol. 9	No. 2	November, 1962
Vol. 10	No. 1	April, 1963

A few copies of the Index to Volume 8 are also available. One copy free to subscribers. Extra copies \$1.00 each.

Beginning with the current issue (Vol. 10, No. 2) back issues will be priced at \$2.00 per copy for individuals and \$3.00 for organizations.



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Research Digest

Volume 11

Number 1

April, 1964

Bureau of Community Planning · University of Illinois

UNIVERSITY OF ILLINOIS

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Editor's Notes

The editor regrets the delay in publication of this issue of the Digest. He has always wondered what would happen if the publication date arrived earlier than a sufficient number of contributions to warrant preparation of the issue. Now he knows.

Urban and Regional Studies at U.S. Universities, a report based on a survey conducted by the editor last year for the Committee on Urban Economics of Resources for the Future, Inc., is now available. Covering the period 1957-1962, it contains abstracts on nearly 700 studies completed or in process selected from submissions made by 244 research groups at 99 major institutions. Interested readers may obtain copies from the John Hopkins Press, Baltimore, Md. 21218, at \$2.00 each. (SK)

Founded in 1954 by an informal organization known as the Urban Planning Research Group, the Research Digest is prepared and distributed semi-annually in April and November, by the Bureau of Community Planning of the University of Illinois. Its objective is to serve as a medium of communication among individuals and groups engaged in urban and regional research. Abstracts are invited covering research projects recently initiated, projects well underway on which significant progress or findings can be reported, and projects recently completed. Brief notes on items of interest to researchers in this field are also desired, as are special articles in keeping with the character of the publication. Subscription is \$4.00 per year for individuals and \$6.00 for organizations. Address all communications to Research Digest, Bureau of Community Planning, University of Illinois, 1202 West California Avenue, Urbana, Illinois.

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1. PERFORMANCE OF URBAN FUNCTIONS: LOCAL AND AREAWIDE

Main Investigators: Albert J. Richter, Sally Oleon Shames, and Marjorie Cahn Brazer.

Status of Research and Publications: Completed and issued as information report, September, 1963. 281 pp.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. To identify urban functions which are most appropriately performed on an areawide basis and those which are better performed by individual local governments.

Method of Study. Evaluation of performance of fifteen government functions, representing about 85 per cent of total local government expenditures, and preparation of an array ranging from "most local" through "most areawide" according to specified economic, administrative and political criteria.

Major Findings. The fifteen functions analyzed were ranked in order as follows: fire protection, public education, refuse collection and disposal, libraries, police, health, urban renewal, housing, parks and recreation, welfare, hospitals and medical care facilities, transportation, planning, water supply and sewage disposal, and air pollution control. Extensive background information on the urban functions is also provided, including current practice in administering the services, the effects of state and Federal programs on standards of service, and specialists views as to optimum scale of level of service. (SK)

2. EFFECT OF TAX AND EXPENDITURE PRACTICES ON LOCATION OF INDUSTRY AND ECONOMIC DEVELOPMENT

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. To ascertain extent and characteristics of competitive state and local fiscal measures calculated to attract industry; to appraise their effects on state and local finances and economic development; and to establish policy guidelines for consideration of these governments. (SK)

3. ROLE OF EQUALIZATION IN FEDERAL GRANTS

Main Investigators: Selma J. Mushkin, Jacob M. Jaffe, and Robert K. Kinsey.

Status of Research and Publications: Completed and published as a Commission Report, January, 1964. 258 pp.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. To appraise the extent to which differences in the respective states' fiscal capacities and program needs should receive recognition in the allocation of Federal grants among the states.

Method of Study. Analysis of the distribution of grant funds under existing programs, individually and collectively, in relation to total state-local expenditure for the individual programs as well as their collective impact on state-local finances and program levels. Examination of distribution among states in terms of the fiscal ability and tax effort indexes developed in Commission's staff study Measures of State and Local Fiscal Capacity and Tax Effort.

Major Findings. About one-third of Federal grant-in-aid programs, accounting for 18.6 per cent of grant distributions in 1962 contain explicit fiscal equalization provisions, most of which have been written into law since World War II. Over-all equalization effect of these provisions is not yet significant. Likelihood of future changes in role of grant-in-aid is suggested by emerging problems, e.g., continuing deficiencies in program levels in at least some parts of country; prospects of continuing upward pressure on state and local spending; growth of disproportionately heavy service loads despite disproportionately low taxpaying capabilities in some central cities as a result of urbanization; potential need to retard property and consumer tax rate increases for reasons of economic policy. Ultimate scope of changes implied for grant system still somewhat imponderable. Meanwhile, eight recommendations are made to improve effectiveness of system for tasks now assigned to it. (SK)

4. INTERGOVERNMENTAL PROBLEMS ARISING FROM ECONOMIC AND RACIAL DISPARITIES BETWEEN CENTRAL CITY AND SUBURBAN POPULATIONS

Main Investigator: Marjorie C. Brazier.

Status of Research and Publications: In process.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. To examine nature and extent of economic, social and racial disparities between central cities and their suburbs; significant relationships between these disparities, national goals of social and economic welfare, and public service needs; and possible changes in public policy which might be considered in light of facts and trends. Study will be based in part on analysis of 1960 Census data. (SK)

5. INTERGOVERNMENTAL PROBLEMS IN RELOCATION OF FAMILIES AND BUSINESSES AS A CONSEQUENCE OF GOVERNMENTAL PROGRAMS

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. To identify nature and seriousness of relocation problems, including lack of uniformity among governmental programs; to appraise pertinent governmental policies and programs; and to suggest ways in which these policies and programs can be strengthened to help Federal, state and local governments to deal effectively and equitably with relocation. Emphasis will be on intergovernmental aspects of relocation problems and proposed changes in governmental programs and policies. (SK)

6. SPECIAL PURPOSE DISTRICTS

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. An analysis of the impact of special districts on the effectiveness of local government in metropolitan and rural areas, as well as a discussion of the relative advantages and disadvantages derived from the use of special districts. (SK)

7. ORGANIZATION AND PLANNING REQUIREMENTS IN FEDERAL PROGRAMS OF FINANCIAL AID FOR URBAN DEVELOPMENT

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. This study reviews current requirements contained in 43 Federal financial aid programs for the physical development of urban areas with respect to their overall impact on the effectiveness of local government organization and local government planning processes, and the extent of interagency coordination in the administration of these Federal aids. The purpose of the study is to provide a factual basis for implementing, through appropriate legislative and administrative adjustments in the Federal programs, the

following previously adopted Commission policies: (1) strengthen general purpose units of local government; (2) encourage joint participation in Federal aid projects by two or more local governments in the same urban area; (3) promote effective urban planning by local governments; and (4) establish a unified urban development policy which will promote interagency coordination within the Federal government. (SK)

8. URBAN ECONOMIC DEVELOPMENT AND TAX EXEMPTION OF IMPROVEMENTS

Main Investigator: James T. Gibbs.

Status of Research and Publications: In process. Completion expected by late spring, 1964.

Agency: American Institute for Economic Research, Great Barrington, Massachusetts.

Previous Digest Report: None.

Research Problem. To determine what differences can be found in the economic development of the cities of a metropolitan area, and whether or not exempting improvements from taxation appears to be a significant factor accounting for such differences.

Previous Relevant Research. None involving a comprehensive analysis of all cities of a metropolitan area. Public Charges Upon Land Values by the Land Values Research Group of Australia is largely an interstate study.

Method of Study. Beginning with the year 1927, annual per capita series of the number of building permits issued for new private dwellings and of the value of all buildings for which permits were issued, for each of the 28 cities of the Melbourne metropolitan area of Australia, were constructed. Arrays of these series by level and by indexes based on a prewar period revealed substantial differences among cities.

Major Findings. Analysis of cities in the lower third of each array showed that such cities were largely those of the inner core that taxed improvements; most cities in the upper third of each array were those of the outer ring that exempted improvements from taxation. Comparisons of groups of outer ring cities that did and did not tax improvements showed that in the latter as compared with the former, annual per capita dwelling construction was from 20 to 90 per cent greater and the annual value of all building per capita was from 25 to 150 per cent greater during a 25-year period. Other factors that appeared to be related were population density and an intercorrelate, distance of the city from the central business district. Data have been requested for series that may indicate other aspects of urban economic development; analysis of these will be included in the study. (JTG)

9. COORDINATED HIGHWAY AND URBAN PLANNING FOR SMALL CITIES

Main Investigators: William S. Bonner and Kenneth H. Thompson,

Status of Research and Publications: Completed and published by agency.
See "Coordinated Highway and Urban Planning for Small Cities."
47 and vi pp., July, 1963.

Agency: University of Arkansas, City Planning Division, under sponsorship of United States Department of Commerce, Bureau of Public Roads.

Previous Digest Report: 9:1, p. 62.

Research Problem. To identify problems in achieving coordination of highway and urban planning for small cities and the steps being undertaken by agencies in the several states to achieve coordination; and to suggest methods and procedures by which coordinated planning may be developed between the state highway department and the state agency for local planning assistance to insure best utilization of the Federal highway planning survey funds and the Federal 701 urban planning assistance grants in developing plans for small cities.

Method of Study. Conducted by questionnaire with response from all states that provide 701 urban planning assistance and by visitations by the investigators to selected states to discuss problems and achievements.

Major Findings. Report sets forth methods and techniques that may be used to achieve coordinated planning as well as factors that contributed to better coordinated planning. (WSB)

10. A UNIFORM CODING SYSTEM FOR LAND USE

Main Investigators: Rodney E. Engelen and Robert B. Teska.

Status of Research and Publications: Draft report completed in November, 1963 is being reviewed by the Urban Renewal Administration prior to publication.

Agency: Barton-Aschman Associates, Inc., for Housing and Home Finance Agency, Office of the Administrator.

Previous Digest Report: None.

Research Problem. During the past decade significant progress has been made toward a common language in fields related to urban planning, as evidenced by the 1960 U.S. Census of Population and Housing and the Standard Industrial Classification Manual published in 1957 by the Bureau of the Budget for statistical purpose in the area of economics. The need for similar progress in the field of urban land-use, however, still persists.

The purpose of this study was to develop a uniform coding system for the description of urban area land-use and to present it in the form of a technical guide. The guide is designed for use by professional staffs, primarily in connection with urban planning, urban renewal, mass transportation, and open space programs conducted with the assistance of the Housing and Home Finance Agency.

Method of Study. The study was carried out in five steps: (1) Preparation of a "prospectus" outlining the problem and suggesting a procedure of study which was reviewed by persons representing a wide range of experience on the subject prior to continuation of the study; (2) review analysis of over 50 land-use classification systems currently being used throughout the country; (3) formulation of an over-all approach to the description of urban land-use as a framework by which to relate and define the many characteristics of land-use; (4) personal visits to 13 major studies being conducted throughout the country to investigate detailed techniques of land-use description, data collection, processing and presentation, and to review the over-all approach with other experienced professionals; and (5) development of a uniform coding system for Activity -- this being considered the most important single characteristic of land-use for which comparability is desired.

Major Findings. The study produced and recommends a four-digit coding system for land-use activities, which, though based on the SIC idea, incorporates several substantially different major categories appropriate to land-use. In addition, the report discusses, illustrates and evaluates procedures and techniques for data collection, processing (manual and electronic), storage, and retrieval; and it also discusses systems for the description of 20 other characteristics of land-use. (RBT)

11. NEW WAR BETWEEN THE STATES

Main Investigator: Edwin C. Gooding.

Status of Research and Publications: Parts I and II published in New England Business Review, October, 1963 and December, 1963, with mimeographed supplements available. Parts III and IV to be published in New England Business Review during 1964.

Agency: Federal Reserve Bank of Boston.

Previous Digest Report: None.

Research Problem. What are the financial instruments now being utilized by states to attract new industry, how effective are they, and what possible long term impact could they have on the State and Nation as a whole?

Previous Relevant Research. (1) Advisory Commission on Intergovernmental Relations, Industrial Development Bond Financing, June, 1963. (2) Missouri Resources and Development Commission, George D. Hack. Industrial Development Financing in the United States, March, 1961. (3) Committee for Economic Development, Donald R. Gilmore. Developing the "Little" Economies, April, 1960. (4) A series of articles in the

New England Business Review on business development corporations. June, 1958; April, 1958; November, 1954; August, 1954; July, 1954; January, 1954.

Hypotheses. The interstate competition for industry and the financial innovations precipitated there-by have mixed implications for the respective states and the economy as a whole.

Method of Study. A mail survey was made of all 50 state development commissions to determine the financial industrial development instruments existing in the state, and the opinion of the state commissioners as to their relative effectiveness. Also business development corporations in the National Association of B.D.C.'s returned activities reports and annual reports, from which analysis was made of their loan activities. An analysis was made of the use of state credit for industrial purposes, either directly or through insurance, after a 100% survey of the responsible officials in states which used or planned to utilize these techniques. The entire study will be completed with mail questionnaires and/or personal interviews in the states which allow municipal bonding and tax exemptions or concessions.

Major Findings. (1) Between 1960 and 1962, 19 states put one or more of the four types of industrial development programs into use; as of September 1963, only 6 states had not authorized at least one of these techniques. (2) Eighteen business development corporations are in operation, aiding expansion of firms whose growth might otherwise be stunted, by incurring risks and charging just enough to cover their costs. With only small costs to the initial stockholders, B.D.C.'s provide an effective tool for economic development. (3) Seven industrial building authorities, which have collectively only 15 years of experience, have suffered no losses. With very little encroachment on public funds (the state pledges its credit, keeping a reserve fund for defaults), these insurance programs provide risk credit to capital-shy firms with good income prospects. (4) In 20 years of collective experience, industrial loan programs in 11 states have provided \$60 million of long term loans for industry with minimal losses (.05%). With certain minimum safeguards, such as use in depressed areas only, a requirement of bank participation and of no alternative source of funds, minimum interest rates, and limiting the loan to land and buildings, it is felt that these direct loan programs could be effective tools for the states which have adopted them, and through encouraging innovation and greater efficiency, for the national economy. Without such safeguards the effects are less certain. (HCD)

12. AN ANALYSIS OF MUNICIPAL FINANCE IN THE BOSTON METROPOLITAN AREA -
IMPLICATIONS FOR POLICY DECISIONS

Main Investigator: Richard J. Olsen.

Status of Research and Publications: In process. Final report expected in July, 1964.

Agency: Boston College, Bureau of Public Affairs.

Previous Digest Report: None.

Research Problem. There has been created a metropolitan area planning agency for 47 cities and towns in the Greater Boston Area by Chapter 668, Acts of 1963, Massachusetts General Court. The common denominator for membership is any community which is a member of the Metropolitan Water, Parks or Sewer Districts. Mr. Olsen has selected four communities for a thorough analysis of their revenues and expenditures over a period of 10 years. In this analysis, the aim will be to distinguish a pattern of spending trends according to function, and to project these trends to 1970, taking into account economic development and population growth. On the revenue side, the goal will be to ascertain the impact of growth patterns on basic municipal taxes and other sources of revenue, with a view to providing the municipal administrator and others with some guidelines for effective policy decisions. In the event that the pilot study offers a real basis for further exploration, then it is the intent of the Bureau to encourage a full scale study of the entire metropolitan area planning district. (RJMO'H)

13. THE IMPACT OF TRANSPORT INVESTMENT ON ECONOMIC DEVELOPMENT

Main Investigator: George W. Wilson.

Status of Research and Publications: In process. Scheduled for completion by the end of 1964.

Agency: Brookings Institution, under sponsorship of the Agency for International Development. (Project is part of Transport Research Program, under general direction of Wilfred Owen.)

Previous Digest Report: None.

Research Problem. Too little is known about the importance of transportation investment relative to other forms of investment as a stimulus to growth. It is difficult to determine whether developing countries are spending too much or too little on transportation compared to other alternatives and whether the right kind of transportation is being provided. Since transport expenditures constitute a significant proportion (20-30 percent) of the development budgets of many developing countries, this sector of the economy deserves close scrutiny in order to avoid the waste of scarce resources. It is hoped that the formulation of more relevant concepts concerning the role of transportation in development will help guide resource allocations in emerging economies.

Method of Study. Exploration of the nature of the relationship between transport and development through case studies--before-and-after studies of a number of transport projects in Latin America and South Asia. The study consists of two parts: (1) the formulation of broad theoretical concepts supported by evidence derived from the case studies, and (2) a description of the case studies. The cases chosen involve situations where a major transportation improvement has recently (i.e., within the past decade) taken place and where relevant data exist on the economic situation prior to the institution of the transport improvement. The cases, which are based on field work, illustrate what has actually happened as a result of a transport improvement--effects of improved transport on resource supply, productivity, levels of living, political cohesion, and social outlook. (GWW)

14. THE MEASUREMENT OF STRUCTURAL UNEMPLOYMENT

Main Investigators: Barbara R. Berman and David Kaun.

Status of Research and Publications: In process. Scheduled for completion in September, 1965.

Agency: Brookings Institution, under sponsorship of the Area Redevelopment Administration.

Previous Digest Report: None.

Research Problem. This study begins with the propositions that "structural" unemployment exists, that it is an important national problem, and that private and public policies should be developed to reduce or eliminate it. Our major objectives are to develop an operational definition of structural unemployment and to use it as a basis for measuring the number and characteristics of those who are structurally unemployed. We will also want to review the question whether the problem of structural unemployment has become more serious in recent years, or whether the higher levels of unemployment can be attributed to inadequate demand and slow growth. Finally, we hope to evaluate past proposals for reducing structural unemployment and, if possible, to suggest new methods of coping with the problem. (BRB)

15. THE POLITICAL DYNAMICS OF LAND RESOURCE PLANNING

Main Investigator: James B. Jamieson.

Status of Research and Publications: Doctoral dissertation, in process.

Agency: Brown University, Department of Political Science, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Given the factors of suburbanization -- rapid growth, the ever-increasing demand for land, soaring property values, and the resulting intensification of land-use politics -- how can suburban communities effectively provide for the open space and recreational needs of their citizens?

Hypotheses. That the task of providing open spaces is, at the core, a political struggle and that an inadequate knowledge of land-use politics can spell defeat for the most well drawn and thought out plans. It is assumed that the informal processes of government are as important as the formal and that it is not possible to grasp adequately all of the ramifications of recreation resource politics until the major public and private interests which are likely to be affected are identified and their positions clearly understood.

Method of Study. Analysis and comparison of the politics of planning and the land-use records of three suburban communities in Southern California, representing the two extremes and a middle ground in land resource planning.

Three basic research tools have been utilized: personal interviews with individuals in key governmental and organizational positions; state, county, and local records and local newspaper files; and attitude surveys and park bond voting studies. (JBJ)

16. COMPETITION AND OLIGOPSONY IN THE DOUGLAS FIR LUMBER INDUSTRY

Main Investigator: Walter J. Mead.

Status of Research and Publications: Research has been underway for about five years and is now complete. The findings are now in manuscript preparation form and a book length manuscript will be ready for publication in the summer, 1964.

Agency: University of California (Santa Barbara), Department of Economics, under sponsorship of Resources for the Future, Inc. Parts of the study have been sponsored by the U.S. Department of Agriculture, Forest Service and by University of California (Los Angeles), Bureau of Business and Economic Research.

Previous Digest Report: None.

Research Problem. Research is concerned with the degree and results of competition in two areas, the input level (timber resources in fee ownership and annual purchases from the Federal government) and the lumber output level. Attention will be focused on the structure of the Douglas fir lumber industry; the behavior of competitors as timber buyers, raw material managers, and lumber producers and sellers; and on the performance of the industry with reference to stated objectives.

Previous Relevant Research. (By the author) (1) Mead, W.J., Mergers and Economic Concentration in the Douglas-Fir Lumber Industry, U.S. Department of Agriculture, Research Paper PNW 9, February, 1964. (2) -----, "Seasonal Variation in Lumber Prices," J. of Forestry, February, 1964, pp 89-94. (3) -----, "The Changing Cyclical Character of Residential Construction and its Impact on Lumber Production and Prices," Proceedings Western Economic Association, 1961. (By others) (1) Weintraub, Sidney, "An Examination of Some Economic Aspects of Forest Service Stumpage Prices and Appraisal Policy," a mimeographed report prepared for the U. S. Forest Service, 1958. (2) Guthrie, J. A. and G. R. Armstrong, Western Forest Industry, Johns Hopkins University Press, 1961. (3) Zaremba, Joseph, Economics of the American Lumber Industry, Robert Speller & Sons, 1963.

Hypotheses. Among the several hypotheses tested are the following: (1) The post-war merger movement in the lumber industry has substantially lessened competition in lumber production and has substantially increased concentration in timber resource ownership; (2) The capital gains tax and the manner of its administration have contributed to the merger movement; (3) The post-war merger movement and the high drop-out rate among small firms have resulted in pockets of oligopsony in the market for Federal timber; (4) The presence of large firms as important operators in small geographical markets for Federal timber is negatively correlated with the degree of competition for Federal

timber; (5) The number of bidders is positively correlated with degree of competition for Federal timber in small geographical areas; (6) The size of timber sales and the cost of road construction to be completed by the buyer are both negatively correlated with the degree of competition for Federal timber in small geographical areas.

Method of Study. Research is based on extensive interviews with lumber producers and buyers of Federal timber and with timber sale administrators. Further, National Forest timber sales for the Douglas fir subregion, 1951-1962 have been coded on IBM cards and subjected to multiple regression analysis in an attempt to identify relationships between the degree of competition and several independent variables. (WJM)

17. AN INVESTIGATION INTO THE EFFECTS OF URBAN RENEWAL ON PROPERTY VALUES IN THE HYDE PARK-KENWOOD AREA, CHICAGO

Main Investigator: Salvatore V. Ferrera.

Status of Research and Publications: Doctoral dissertation, in process.

Agency: University of Chicago, Department of Economics, under sponsorship of Graduate School of Business, Workshop on Urban Economics.

Previous Digest Report: None.

Research Problem. To determine and measure the effects, if any, which the actual building of new housing developments (the urban renewal projects) have on all adjacent and surrounding properties in a neighborhood (Hyde Park-Kenwood).

Previous Relevant Research. Doctoral dissertation, University of Chicago, "The Effects of Public Housing on Property Values in St. Louis" by Hugh Nourse. (a)

Hypotheses. If the urban renewal projects have any influence on property values these effects would be strongest on properties within closest proximity and dissipate themselves with increased distance from the projects.

Method of Study. The method of the study was to divide the Hyde Park-Kenwood area into five sub-areas. These sub-areas were defined so that the first one was a "ring" one block in depth immediately adjacent

(a) For an abstract of this project, see below, Item 74.
(Editor's note.)

to and surrounding the developments. The second one was another "ring" one block in depth immediately adjacent to and surrounding the first "ring." The other three areas were the rest of the Hyde Park-Kenwood area split into three areas with varying proximity to the urban renewal developments.

Using census data (1940, 1950 and 1960) a percentage change in property values (owner occupied dwelling units) and contract rents was computed for each block between 1950-1960 and also 1940-1960. These were multiply correlated with dummy variables for location (per above) and measures (from the census) for percentage of substandard units, percentage of crowded units, vacancy rates, percentage of non-white occupancy, and number reporting contract rents.

The purpose was to determine the partial effects of the location variables, and/or the other "real" variables, and further to note the interactions between the "dummy" variables for location, and the "real" variables for quality, condition and racial composition.

Major Findings. Only one location variable was significant, and showed that values and rents in Kenwood (farthest area from urban renewal developments) had risen, but significantly less than in all other areas.

Other "real" variables showing significant effects on values and rents were: percentage of substandard units, indicating a negative relationship with values and rents. Also the number reporting contract rents (used to measure the effects of conversions to increased number of smaller units) had a negative relationship with percentage of increase in contract rents. (SVF)

18. CHOICE OF ADJUSTMENT TO FLOODS

Main Investigator: G. F. White.

Status of Research and Publications: Field work has been completed in LaFollette, Tennessee and in five other towns selected for diversity of flood plain situation. Publication expected during the summer of 1964.

Agency: University of Chicago, Department of Geography, with support from Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To estimate the relationships between flood stage and types of damage in urban establishments, and to estimate probable streams of income and cost from adoption of alternative adjustments to floods in individual establishments.

Previous Relevant Research. Study is based upon earlier research on changes in occupance of urban flood plains. A companion piece by R.W. Kates on "Hazard and Choice Perception in Flood Plain Management" has been published as a Department of Geography Research Paper No. 78. (GFW)

19. THE SPATIAL STRUCTURE OF AUTO THEFT WITHIN THE CITY: WORCESTER, MASSACHUSETTS, AS A CASE STUDY

Main Investigator: Van M. Aroian.

Status of Research and Publications: Doctoral dissertation. In process. Completion expected by late May, 1964. Will be available in microfilm from University Microfilms, Inc., Ann Arbor, Michigan.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Research Problem. To investigate the pattern of automobile larcenies within the city.

Hypotheses. That auto larcenies within the city form a discernible, predictable pattern rather than exhibiting an unordered, scattered arrangement.

Method of Study. The study utilizes police and court data to determine the "where" of auto larceny. This distribution is compared with the location of the auto theft population potential by time of day and season of the year.

Major Findings. The auto theft phenomenon is patterned and is associated in space with specific land uses. (REM)

20. THE AMERICAN CITY: AN URBAN GEOGRAPHY

Main Investigator: Raymond E. Murphy.

Status of Research and Publications: Book, which is now in press. To be published by McGraw-Hill Book Company, Inc. Estimated date of publication, Spring, 1965.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Method of Study. The field of urban geography is treated on a systematic basis with particular emphasis on research ideas and sources. Urban geography as a field of inquiry is stressed. The book concentrates on the American city. (REM)

21. TOWN STRUCTURE AND URBAN CONCEPTS IN NEW ENGLAND

Main Investigator: Raymond E. Murphy.

Status of Research and Publications: Research completed and published as article, "Town Structure and Urban Concepts in New England," which appeared in The Professional Geographer, Vol. XVI, March, 1964, pp. 1-6.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Method of Study. Various urban concepts are examined from the standpoint of their adjustments to New England town structure. (REM)

22. THE INTRA-CITY MOVEMENT OF INDUSTRIAL FIRMS

Main Investigator: Robert J. Gardula.

Status of Research and Publications: Doctoral dissertation, in process.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Research Problem. Despite the increased pressures forcing industrial firms out of the city, a number of companies experiencing a relocation of operations have confined themselves to movements between points inside the corporate limits of the same city. What are the characteristic features of these firms, from what sections of the city have these firms moved, where in the city have they relocated, by what methods has the site-selection process proceeded, and how do these manufacturers perceive the advantages and disadvantages of their urban locations?

Previous Relevant Research. Detroit City Plan Commission, "Preserving the Industrial Base of Detroit," Urban Land, Vol. 16, No. 7, July-August, 1957; Greater Boston Economic Study Committee, Business Relocation Caused by the Boston Central Artery, Economic Base Report No. 6, April, 1960; Kinnard, William N., and Malinowski, Zenon S., The Impact of Dislocation from Urban Areas on Small Business, University of Connecticut, July, 1960; Walker, Mabel, Business Enterprise and the City, Tax Institute, Inc., Princeton, N.J., 1956.

Hypotheses. Manufacturers who relocate their companies on an intra-city basis are influenced to a great extent by non-cost factors, in deciding to remain within that city.

Method of Study. Using various industrial directories and agency files, all industrial firms having completed an intra-city relocation since 1957 in Fall River, Hartford, Providence, and Worcester were determined. Each of these firms is being contacted by means of a mailed questionnaire consisting of three major divisions: (1) Description of Industrial Operations; (2) Organization of Company for Locational Investigations; and (3) Evaluation of Existing Location. In addition, public and private agencies which have assisted in the relocation of industrial firms in each of the four study-cities are being canvassed by personal interview. Using the information collected by means of these surveys, an attempt will then be made to reveal the roles of various forces in motivating the decisions of manufacturers who remained in the city despite a relocation experience. (REM)

23. INTRA-CITY PATTERNS OF RESIDENTIAL VACANCY RATES

Main Investigator: Carolyn J. Ryan.

Status of Research and Publications: Research completed and submitted as doctoral dissertation. Will be available in microfilm from University Microfilms, Inc., Ann Arbor, Michigan.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Research Problem. To analyze spatial variations in the degree of residential vacancy within cities as they relate to a number of residential, economic, and population characteristics. One of the principal questions raised was: Are areal differences in the degree of residential vacancy related to differences in the quality of residential areas which may reflect their desirability for residential location?

Method of Study. Using census tract data and data collected from individual planning agencies, relationships between variations in vacancy rates and eleven hypothesized variables were examined for five cities -- Baton Rouge, Louisiana; Fort Wayne, Indiana; Rockford, Illinois; Savannah, Georgia; and Worcester, Massachusetts. The eleven variables were as follows: rates of household mobility, housing construction rates, proportion of owner occupance, percentage of housing units in single unit structures, value of housing, degree of substandardness, degree of overcrowdedness, income, proportion of non-whites in the population, residential density, and population changes. A statistical design, embodying simple correlation and regression, variance analysis, and stepwise multiple regression methods was employed. Five separate multiple regression models -- one for each city -- were developed and compared.

Major Findings. The precise nature of the relationships between the distribution of vacancy rates and the eleven hypothesized factors differed from city to city. In the three northern cities, however, there were a number of similarities. In general, high rates of vacancy in these cities occurred in the older, low-quality, low-income, residentially mobile, central residential areas of the city. These areas had also experienced population losses. Low vacancy rates occurred in the newer, owner-occupied, higher income, peripheral sections of the city.

The two southern cities were quite different. They had to be treated separately because of vacancy rate and other residential differentials between white and non-white areas of the cities. Further analysis of vacancy rates in these cities had to take cognizance of the differences between the white and non-white groups of tracts.

In the three northern cities, the spatial outlines and the relationships between varying degrees of vacancy accorded well with the theories of Hoyt and Burgess. But in the two southern cities, the conclusion was that the "economic man" assumptions implicit in the theories must be relaxed in order to account for the differences which exist between the distinctive kinds of residential areas. (REM)

24. FIVE CASE STUDIES OF COMMUNITY EFFORTS TO RECOVER FROM CHRONIC UNEMPLOYMENT

Main Investigators: Donald R. Gilmore, (Burlington, Vermont); V. C. Crisafulli, (Utica-Rome, New York); J. J. Kaufman and Halsey R. Jones, Jr., (Altoona, Penna.); J. W. Milliman and W. G. Pinnell, (Evansville, Ind.); W. Paul Brann, (Helena, Arkansas); John H. Nixon, (Editor).

Status of Research and Publications: Field work interviewing and preparation of reports completed. Publication expected in summer of 1964.

Agency: Committee for Economic Development, 711 Fifth Avenue, New York 22, New York.

Previous Digest Report: None.

Research Problem: Five areas were studied to learn why they suffered from chronic unemployment and what was done to stimulate recovery during the period 1950 to 1960 or later.

Method of Study: The studies begin with a discussion of the location and historical background of the area. Statistical data of the decade from 1950 to 1960, and in some cases up to 1963, are examined. Attention is given to population movements, labor force changes, and changes in employment patterns and unemployment rates. They analyze the reasons for the decline of employment in each area. Then the efforts of the area to recover from depressed conditions are studied in detail. Much attention is focussed on efforts to bring new industry into the areas. They examine various unsuccessful and successful programs and techniques, as well as individual concerns' locational reasons. Attention is given to efforts in related fields, such as retraining of workers, land use planning, public facilities and services, labor relations, and community cooperation. The influence of migration of workers and families into or out of the areas is examined.

Major Findings. The Burlington study describes the shift of the economic base of a New England community from textiles to various types of machinery through the efforts of a well-led local industrial development program. The Utica-Rome study covers an area that lost its textile industry and substantial employment in the railroad industry. It replaced these with basic employment in the manufacture of machine tools, electronics, and the operation of a military air base and military supply functions. In Altoona, Pennsylvania employment in the car shops and other installations of the Pennsylvania Railroad declined steadily over a long period for technological and competitive reasons. A well-organized industrial development program has offset some of this employment loss. Evansville, Indiana in 1950 enjoyed full employment but defense contracts in the early fifties increased total employment 20 per cent and then were cut back quickly, leaving the community with an expanded and redundant labor force. Shortly thereafter several major peacetime manufacturers closed or moved. In eight years full recovery was achieved. Helena-West Helena, Arkansas is a manufacturing and wholesaling center in the midst of an

agricultural area. Constant out-migration from agriculture, together with the closing of a military installation and a large manufacturer, created continuous unemployment. Community industrial development efforts have helped to fill the gap but have not been equal to the broad economic forces at work in the area. (DRG)

25. FIELD RECONNAISSANCE SURVEY OF THE BRISTOL-PLYMOUTH AREA OF CONNECTICUT

Main Investigator: George Perazich.

Status of Research and Publications: Report completed, to be published by sponsor.

Agency: Economic Associates, Inc., under sponsorship of Area Redevelopment Administration.

Previous Digest Report: None.

Research Problem. In a week of concentrated local interviewing, to ascertain the community's principal barriers to economic development and to formulate both short- and intermediate-range solutions, in terms of specific, practicable action programs. Approach is essentially an experiment in the use of this kind of outside expert survey as a tool for getting constructive programs quickly into motion. Action programs are discussed in the community and again in an oral report to ARA, prior to the written report. This is one of the first such studies to be undertaken for ARA by an outside contractor; others are expected to follow. Earlier studies of the type were carried out by ARA staff. (LLF)

26. PROSPECTIVE DEMAND FOR INDUSTRIAL LAND IN THE DISTRICT OF COLUMBIA, YEAR 1985

Main Investigator: George Perazich.

Status of Research and Publications: Report completed and submitted to sponsor.

Agency: Economic Associates, Inc., under sponsorship of National Capital Planning Commission.

Previous Digest Report: None.

Research Problem. To estimate probable requirements for industrial land and floor space in the District of Columbia in the year 1985, and to describe general characteristics of locations and structures required.

Method of Study. Three kinds of source data were subjected to analysis: (1) an industrial land use inventory previously compiled by sponsor; (2) an ad hoc questionnaire on present and intended land use which was directed to a cut-off sample of Washington firms; and (3) interviews with key firms in important industrial-land-using categories. Quantitative derivations were combined with judgements

stemming from the statistical data and the interviews to arrive at the various projections.

Major Findings. (1) Over two-thirds of the "industrial" land use in the District of Columbia is for warehousing and related activities, including the detached warehouse facilities of retail firms. This situation is likely to continue. (2) There is a pronounced gravitation of "industrial" facilities, as time goes on, toward principal highway routes, particularly Outer Loop locations providing convenient access not only to Washington and its suburbs, but to Baltimore. (3) Nonetheless, some labor-intensive industries, notably large-scale printing, prefer central locations and would continue such locations if suitable sites were available. (4) Other (e.g., bakeries) are likely to hold on to their central locations as long as possible, but when forced to move, by urban renewal or severe obsolescence of structures, will probably gravitate outward. (LLF)

27. LOCAL ECONOMIC PROGRAMS: A CASE BOOK (STUDIES IN REDEVELOPMENT IN EIGHT NORTHEASTERN COMMUNITIES)

Main Investigators: George Perazich, William T. Stone, Betti C. Goldwasser.

Status of Research and Publications: Published late 1963 by sponsor.

Agency: Economic Associates, Inc., under sponsorship of Area Redevelopment Administration, U.S. Department of Commerce.

Previous Digest Report: None.

Research Problem. To study the varying kinds of efforts made by eight different communities in reacting to a substantial cutback in one of their principal sources of employment.

Previous Relevant Research. The eight communities "were among those selected by the Business and Defense Services Administration, U.S. Department of Commerce, in connection with a 1961 study of the impact of textile mill closings on mill communities. Findings of that study have been published under the title Economic Effect of Textile Mill Closings Selected Communities in Middle Atlantic States" (BDSA, 1963).

Method of Study. Study was wholly by interview technique (except for incidental statistical background). Among interviewees were Chamber of Commerce officials, labor leaders, industry officials, U.S. and local government officials.

Major Findings. "Apparently little systematic planning occurred in any of the communities studied. . ." "A degree of industrial diversification was consciously sought and has been achieved in several communities, so that a once-dominant textile industry now plays a less important role in their economies. . ." "All of the areas tended to concentrate on attracting industries from outside the area rather than trying to create them locally. . ." "The ability and continuity of local

leadership appear to have been decisive factors in successful economic development. . ." "On the whole, the new employment opportunities created through local efforts were seldom sufficient to compensate for the losses of textile jobs, as well as for the local labor force increases that also occurred in several of the communities studied. . ." (LLF)

28. COMPARATIVE COST ANALYSIS FOR PRODUCTION OF SELECTED PRODUCTS IN PUERTO RICO

Main Investigators: Leonard L. Fischman, Elizabeth Fautz.

Status of Research and Publications: In process. Of 50 products being analyzed, half are completed. Information available only with sponsor's permission.

Agency: Economic Associates, Inc., for Puerto Rico Economic Development Administration.

Previous Digest Report: None.

Research Problem. To deduce and estimate, from a variety of statistical sources, reasonably current comparative costs of producing specified manufactured products in selected cities or counties of the United States and in Puerto Rico. Costs, for this purpose, are defined to include delivery to specified destinations.

Method of Study. Principal analytical techniques include the following: (1) For determining comparative labor costs: Starting point, Census of Manufactures production-labor/value-of-shipments ratios for manufacturers of 5-digit items, highest degree of specialization available. Adjusted down to State and local level, and updated, by further Census of Manufactures data, Survey of Manufactures, and State and local wage and hour series. State/National ratios adjusted for differences in product mix. (2) For determining transportation costs: Shipping-weight/unit-weight-or-value ratios determined from (primarily) P.R. trade statistics. Inland freight estimated from ICC waybill statistics by mileage brackets, ocean freight from steamship tariffs; allowances made for local transfer. (3) For determining raw material costs: Differences between U.S. delivery points generally determinable to be negligible (the investigated items were all highly manufactured products). Cost in Puerto Rico generally based on average U.S. price plus ocean freight. (4) For determining selling price at various points of delivery: Based on differences between average U.S. delivery cost and delivery cost from nearest production point, added to respective unit values.

Major Findings. Because the products investigated were already pre-screened according to theoretical criteria on their "suitability" for Puerto Rico, costs of production in Puerto Rico were uniformly lower for all, or most, U.S. delivery points. It is the method, rather than the findings, that should be of general interest. (LLF)

29. PRELIMINARY ECONOMIC AND MARKETABILITY STUDY FOR AKRON, OHIO COMMUNITY RENEWAL PROGRAM

Main Investigators: George Perazich and Jeremy C. Ulin.

Status of Research and Publications: Preliminary draft completed February, 1964. (Part of CRP)

Agency: Economic Associates, Inc., and Candeub, Fleissig & Associates, Newark, N.J., for Akron City Planning Department.

Previous Digest Report: None.

Research Problem. To assess prospective demand for land during the next two decades by relating such demand to the expected growth of Akron's economy.

Previous Relevant Research. Akron Economic Study, 1962, by Citizens Panel on Economic Growth of the Akron area.

Method of Study. Comprehensive economic projections were developed, including such elements as population, labor force, employment and its industrial distribution, households by income bracket, and other elements, all integrated into an internally consistent model. From these were derived projections of residential, commercial, industrial, and public land needs, by general location within the metropolitan area.

Major Findings. Future demand for land in Akron depends heavily upon the future of the rubber industry, the aggressiveness with which new industries are attracted to the area, and the degree to which needed public land uses are satisfied. In all probability, moderate increases in land availability will be required. (LLF)

30. INDUSTRIAL DISTRICTS - THEIR PLANNING AND DEVELOPMENT

Main Investigator: George I. Whitlatch.

Status of Research and Publications: Completed and published. (Special Report 41, January, 1963. Price \$2.00.)

Agency: Georgia Institute of Technology, Engineering Experiment Station, Industrial Development Division.

Previous Digest Report: None.

Research Problem. To provide, in a single convenient reference, the essential information local development groups require for the planning and development of industrial districts. It is the result of careful review of latest available publications in this field, plus long experience in industrial development work on the part of the author. (GIW)

31. DECISION MAKING FOR PUBLIC INVESTMENT IN WATER RESOURCE DEVELOPMENT
IN THE UNITED STATES

Main Investigator: David C. Major.

Status of Research and Publications: In process. Completion expected by
October 1, 1964.

Agency: Harvard University, Water Program.

Previous Digest Report: None.

Research Problem. Recent theoretical developments in economics and political science emphasize that optimization in the public investment sector is achieved by selecting projects according to a consistent set of centrally determined investment criteria. (This set includes, for example, a social rate of discount and redistribution objectives.) If the consistent set of investment criteria is correctly formulated in the legislative process and correctly implemented by line agencies, the project mix of public investment should accurately reflect social preferences. The present study seeks to determine the extent to which individual investment criteria are properly implemented by the Federal Government, and, further, to determine the capability of the legislative process in the United States to generate public investment criteria reflecting social preferences.

Method of Study. It was decided to concentrate on water resources development in investigating the use of individual criteria, since techniques of benefit-cost analysis are most highly developed in that sector. Data have been derived principally from two recent major planning efforts of the Corps of Engineers, the largest water resources agency. These plans are those for the Delaware (1960) and Potomac (1963) River Basins. In studying the development of investment criteria formulated in the legislative process, certain programs of three Federal agencies in which such criteria are used have been examined. The agencies are the Area Redevelopment Administration, the Housing and Home Finance Agency, and the Bureau of Public Roads. The criteria investigated are typified by, for example, the standards by which the Area Redevelopment Administration designates areas eligible for assistance.

Major Findings. Preliminary results seem to indicate that with careful administration the best features of investment programs in several public sectors could be combined to achieve, particularly in water resources development, optimal public investment programs. (DCM)

32. NATIONAL SURVEY OF METROPOLITAN PLANNING (b)

Main Investigator: Victor Fischer.

(b) Adapted from ASPO Newsletter, February, 1964.

Status of Research and Publications: Completed and published. See National Survey of Metropolitan Planning, Senate Subcommittee on Intergovernmental Relations, Dec. 16, 1963. 70 pp. Available from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402

Agency: Housing and Home Finance Agency, Office of the Administrator, Office of Metropolitan Development in cooperation with American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. Survey of metropolitan planning activity, covering such factors as planning commission size and composition; areal jurisdiction; budgets, revenue sources and expenditures; staff size; nature and extent of technical studies completed or underway; technical assistance activities; public relations activities; inter-agency relationships; and opinion as to agency strengths, weaknesses, and special problems in which Federal programs would be helpful.

Method of Study. Questionnaire survey covering 142 Standard Metropolitan Statistical Areas having some form of metropolitan planning activity underway in spring of 1963. Tabulation and analysis of completed questionnaires and preparation of the study for publication carried out by ASPO.

Major Findings. The study findings are reported in two parts. Part I includes 18 summary tables, with accompanying analysis. Part II gives, in tabular form, specific data on each agency covered in the study.

Some highlights among many important findings of this study are the following:

Metropolitan planning agencies have little real power. Basically whatever influence they exert stems from their ability to persuade through suggestion and recommendation. Although half are required by statute to adopt a comprehensive plan, less than one out of four reports that other area-wide agencies are specifically authorized to adopt this plan.

In 1963, the total amount budgeted for metropolitan planning was almost 20 per cent greater than in 1962. County and city-county agencies were financially stronger than multi-jurisdictional agencies: the average budget for the latter, in the 500,000-999,999 population group, is \$104,000; the comparable averages for city-county and county agencies serving similar population classes are respectively \$245,000 and \$162,900.

Multi-jurisdictional agencies serving populations over one million are almost completely supported by the federal and state governments (95¢ out of every dollar) while the smaller city-county and county agencies are supported primarily by local governments.

The largest agencies serving areas of one million or more people have an average staff size of 25 persons. There is a significant difference between city-county agencies and multi-jurisdictional agencies: the former have an average of 11 professionals per agency in both the 500,000-999,999 and 250,000-499,999 population groups, while the multi-jurisdictional agencies have an average of five in the first and only three in the second population group.

Although metropolitan planning agencies spend less than 10 per cent of their budgets on local technical assistance, nearly two-thirds indicate that they provide some kind of direct technical assistance to local governments.

Metropolitan planning agencies are devoting most of their staff time to general analyses and land use studies; environmental, community facilities and program-type studies have lower priority.

The Midwest and East South Central agencies tend to be stronger and more self-reliant than those in other regions, i.e., they have larger budgets and more professional staff, provide more technical assistance, and rely less heavily on consultants and on federal aid. (VF)

33. PUBLIC ATTITUDES AND AIR POLLUTION IN THE ST. LOUIS METROPOLITAN AREA

Main Investigators: Seymour Z. Mann and Jane Schusky.

Status of Research and Publications: Report completed and submitted to U.S. Public Health Service, Division of Air Pollution. Not yet released for distribution.

Agency: Southern Illinois University (Edwardsville), Public Administration and Metropolitan Affairs Program, and University of Chicago, National Opinion Research Center, under sponsorship of U.S. Public Health Service.

Previous Digest Report: 10:2-21.

Research Problem. To determine public awareness of and attitudes toward various community problems with a focus on air pollution. To determine in what manner complaints are registered, attitudes are formed and action proposed toward the solution to such problems.

Method of Study. A survey of 1,000 residents of the St. Louis Metropolitan Area. An area probability sample was devised to give data on the city and county of St. Louis and on Madison and St. Clair Counties, Illinois. The National Opinion Research Center conducted all field work in this project with analysis and report completed by Public Administration and Metropolitan Affairs.

Major Findings. Most residents of the St. Louis Metropolitan Area recognize air pollution as a problem. Even if concern does not center in their own neighborhood of residence, the respondents in this survey indicate that pollution is significant and bothersome in the total locale. Residents of the Illinois portion indicate greater concern and express

greater desire for complaints about the problem than do residents in the Missouri segment of the area. Most persons cite factories as the primary source of pollutants, with other sources dependent upon the area of residence. In the central city such causes as transport exhausts and smoke rank high, while the less densely settled sections mention pollen and odor from sewers.

Many of the day-to-day activities of Illinois residents are felt to be affected by air pollution. In contrast, residents of St. Louis County feel that little of their life is changed because of pollution problems.

Health effects of air pollution are almost uniformly agreed upon, though some residents with air-related ailments apparently do not feel that there is a connection between their illness and air pollution.

Nearly all respondents feel that some form of governmental action is advisable to organize and supervise an air pollution abatement program. Local control and state cooperation action are selected most often as the form preferred. In addition, a sizeable majority of the residents indicate a willingness to pay, either a tax increase or a cost of living increase, for such an action program. This willingness to absorb costs is related only minimally to opinions about the seriousness of the problem in the residence neighborhood.

Information concerning air pollution reaches the residents from mass media and from more personal contacts. Only the latter form seems related to general interest and concern with the problem. (SZM & JS)

34. DOWNTOWN CHANGE IN THREE MIDDLE-SIZED CITIES

Main Investigator: Everett G. Smith, Jr.

Status of Research and Publications: Completed, October, 1963 - first issue mimeographed.

Agency: Office of Community Development, University of Illinois, under sponsorship of the Ford Foundation and with additional financial assistance from the Research Board, Graduate College, University of Illinois.

Previous Digest Report: 10:1-29.

Research Problem. There is growing concern with downtown problems. This study examines recent functional changes in the Downtowns of three medium-sized metropolitan cities in Illinois: Peoria, Rockford, and Springfield.

Major Findings. Advantages which once accrued automatically to the downtown location because it was the most accessible and efficient setting for performing urban functions, especially retailing operations, have gradually diminished. In all cities Downtowns are multi-functional in nature; however, the business fabric that has always provided the backdrop for the dominant downtown image in middle-sized cities has suffered considerable fraying at the edges in recent years. This study

asserts that difficulties downtown interests experience in making adaptive responses to change stem from constraints that the business image itself imposes upon individual and group action. Market incentives along will neither rejuvenate Downtown nor differentiate the city center from the rising number of shopping centers appearing on the expanding urban periphery.

Data from city directories indicated three major trends in medium-sized Downtowns: first, a sizeable reduction in demand for downtown commercial space, particularly above street-levels; second, an expansion of businesses that remain in downtown locations, especially at street-level; and third, a shrinkage in area of prime retail activity. In appearance and style, Downtowns increasingly resemble newer outlying shopping districts. The responses by downtown interests to retail and service dispersion express on the one hand, an imitation of the technological and managerial modes of developments on the urban periphery, and on the other hand, an intensification of national marketing tendencies toward concentration and centralization. (EGS)

35. THE ESCAPE FROM POLITICS: POWER IN MIDDLE-SIZED COMMUNITIES

Main Investigator: Herbert Gamberg.

Status of Research and Publications: In process. Completion expected by June, 1964.

Agency: University of Illinois, Office of Community Development.

Previous Digest Report: None.

Research Problem. Structure and process of power in middle-sized communities. Data are gathered from Springfield, Rockford, and Peoria, Illinois. Special emphasis is placed upon Peoria case material.

Method of Study. Theoretical background for the research critically examines the underlying assumptions and conceptions of the Hunter-Dahl controversy in community power studies. A body of conceptions is derived which puts renewed importance on the value system and its relation to power. Three major community issues are analyzed by means of intensive interviewing, analysis of newspapers, and participant observation when possible. The Hunter method of reputed sociometry is also utilized to investigate the intent, organization, and attitudes of the economic elite in the community.

Major Findings. Both theoretical analysis and the empirical research confirm limitations in the approaches of both Hunter and Dahl. Wider use of historical materials demonstrates the importance of lack of decision rather than positive decision as the prevailing political condition in the community. Although the Hunter economic-elite pyramid and the Dahl issue pyramid arise at different stages of the community's history, the structure and process of power is more fundamentally linked to the absence of decision-making. An analysis of the value system, which denigrates the political process, explains how power can be structured to maintain the status quo without decision-making necessarily occurring. (HG)

36. THE CHANGING CENTRAL BUSINESS DISTRICT RETAIL SALES MIX, 1948-1958

Main Investigator: Lorne H. Russwurm

Status of Research and Publications: Present phase of research completed and mimeographed. (Department of Geography Discussion Paper 1, University of Illinois, 1963.) Research will be updated when 1962 CBD bulletins are released by U.S. Census of Business.

Agency: University of Illinois, Department of Geography.

Previous Digest Report: None.

Research Problem. To determine: (1) the most "significant" retail groups in the CBD sales mix; (2) how the CBD retail sales mix has varied over time; (3) how the retail sales mix has varied for different sized metropolitan areas.

Hypothesis. That dynamics of the individual CBD retail sales categories are different than the dynamics of the aggregated CBD retail sales.

Method of Study. Manipulation of simple linear regression equations, with retail sales data reported in the U.S. Census of Business bulletins and populations of Standard Metropolitan Areas as the basic variables. Sales totals were adjusted to a common dollar base.

Major Findings. (1) The general merchandise, apparel, furniture, and eating-drinking (GAFE group) retail sales categories were the most "significant" retail group in the CBD retail sales mix. (2) Although all individual components which make up the CBD retail sales total have declined, the decline has varied among individual categories. For instance, apparel sales showed the most consistent decline since 1948; eating-drinking as well as furniture sales showed less decline than other groups since 1954. (3) Except for eating-drinking sales in the 1954-1958 period, all retail categories had greater percentage losses in sales with increasing SMA population. For the 1954-58 period, however, increasing loss with increasing SMA population lessened, and for the GAFE group as a whole held steady regardless of SMA population. In summary, although internal changes in the CBD retail sales mix were significant over the study period, future trends are still uncertain. (LHR)

37. DEVELOPMENT PLANNING PROJECT

Main Investigators: John C. Honey, Rodman T. Davis and Theodore Geiger.

Status of Research and Publications: In process.

Agency: Institute of Public Administration and National Planning Association, under sponsorship of Agency for International Development.

Previous Digest Report: None.

Research Problem. To study ways in which public and private economic planning efforts in developing countries are being harmonized and how government planning is decentralized to lower political units. Countries in Western Europe, Asia, Africa and Latin America will be visited in the course of the study. (AMD)

38. METROPOLITAN AREA ADMINISTRATION

Main Investigators: Frank Smallwood, Rodman T. Davis and Ann-Marie Walsh.

Status of Research and Publications: In process.

Agency: Institute of Public Administration in collaboration with United Nations, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. A comparative study of urban administration in a number of metropolitan areas around the world with a view to discovering their common organizational problems and suggesting solutions. Emphasis on administrative machinery for urban policy planning, decision-making, and policy implementation. While the focus is on urban regions in developing countries, examples from industrialized countries are also included for comparative purposes. (AMD)

39. PROBABILITY PLANNING AND ADMINISTRATION

Main Investigator: Ruth P. Mack.

Status of Research and Publications: In process.

Agency: Institute of Public Administration, under sponsorship of Committee on Urban Economics, Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Impact of uncertainty and probability on urban government decision-making. Determination of areas of government where uncertainty has important operational significance; classification of types of uncertainty; methods of coping with problems arising from uncertainty; and indication of possible further areas of study. (AMD)

40. INDUSTRIAL WATER POLLUTION ABATEMENT STUDY

Main Investigators: Howard N. Mantel and Frederick L. Bird.

Status of Research and Publications: In process.

Agency: Institute of Public Administration, under sponsorship of U.S. Public Health Service, Division of Water Supply and Pollution Control.

Previous Digest Report: None.

Research Problem. Financial and other appropriate incentives to industry to facilitate and encourage industrial waste treatment for the control of water pollution. Consideration of the role of federal, state and local government agencies as well as private corporations in an effective control program; effective use of legal controls. (AMD)

41. CULTURAL INSTITUTIONS STUDY

Main Investigator: Leonard Outhwaite.

Status of Research and Publications: Two year study, initiated March, 1962. Final report in process.

Agency: Institute of Public Administration, under sponsorship of Rockefeller Fund.

Previous Digest Report: None.

Research Problem. Relations of government to community cultural institutions in the United States and abroad, with special emphasis on organization, financing, and administrative control. Deals with requirements for and supply of cultural facilities in certain centers and includes a comparative analysis of European centers. (AMD)

42. YOUTH SERVICES ORGANIZATION STUDY

Main Investigators: Richard A. Cloward, Irma Rittenhouse, Donnell Pappenfort, John Martin, Aaron Schmais, Murray Silberman, Stephen David, James A. Jones, and Betty Jo Bailey.

Status of Research and Publications: Final report completed and in press entitled The Administration of Services to Children and Youth in New York City.

Agency: Institute of Public Administration, for City of New York.

Previous Digest Report: None.

Research Problem. A study of overall administration of the extensive services provided by the city to children and youth, with a view to proposing machinery for general evaluation, planning and coordination of such services, which might serve as a model for other areas as well.

Major Findings. Study proposes the placing of a planning and coordinating unit in the Office of the City Administrator, thus providing a social planning mechanism for the city comparable to the City Planning Commission in the field of physical planning. It includes an inventory of all expenditures by the city for social welfare services to children and youth, totaling more than a billion dollars in a single fiscal year. (AMD)

43. COMMUTER FEASIBILITY STUDY

Main Investigators: Sumner Myers, Michael N. Danielson, Howard N. Mantel, Eugene Barufkin, and Ann-Marie Walsh.

Status of Research and Publications: Completed and published by agency, August, 1963, under title Suburbs to Grand Central.

Agency: Institute of Public Administration, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. Feasibility of reorganizing the suburban services of the New York Central and the New Haven Railroads under a public agency. Engineering, scheduling, and equipment problems, the legal relationships involved, necessary legislation, organizational framework and political engineering were intensively considered. (AMD)

44. CASE STUDIES IN URBAN TRANSPORTATION

Main Investigators: Howard N. Mantel, Michael N. Danielson, and Stephen David.

Status of Research and Publications: Four studies completed, as follows: Urban Transportation in the Charlotte, North Carolina Urban Region, (1962); Urban Transportation in the San Francisco Urban Region, (1962); Urban Transportation in the Philadelphia Urban Region, (1962); and Urban Transportation in the Minneapolis-St. Paul Urban Region, (1963). Inquiries concerning these reports should be directed to sponsor of project at 711 Fifth Ave., New York 21, N.Y. Fifth report, dealing with New York urban region, in process.

Agency: Institute of Public Administration, under sponsorship of Committee for Economic Development.

Previous Digest Report: None.

Research Problem. To summarize status of urban transportation facilities and requirements, and urban transportation planning and decision-making in designated areas. (AMD)

45. STAGGERED WORKING HOURS PROJECT

Main Investigator: Lawrence B. Cohen.

Status of Research and Publications: Project initiated 1960. Confidential interim reports rendered in 1961, 1962 and January, 1963. Final report in process.

Agency: Institute of Public Administration, under sponsorship of New York City Administrator, City Planning Commission, Transit Authority, and Rockefeller Fund.

Previous Digest Report: 6:1-28.

Research Problem. To determine extent to which subway commuter peak can be spread by staggering work hours in Manhattan's central district. (AMD)

46. LINEAR PROGRAMMING MODELS APPLIED TO INTERREGIONAL COMPETITION AND POLICY CHOICES FOR U. S. AGRICULTURE

(Previous Title: Effects of Government Farm Programs Upon Regional Changes and Crop Production)

Main Investigator: Norman K. Whittlesey.

Status of Research and Publications: Doctoral dissertation, completed in January, 1964. Two technical bulletins reflecting findings will be published by Iowa State University during 1964.

Agency: Iowa State University, Department of Economics and Sociology, under sponsorship of Economic Research Service, U.S. Department of Agriculture.

Previous Digest Report: 10:2-36.

Research Problem. An application of linear programming to the surplus problems of United States agriculture. The programming models were designed to investigate the optimum spatial allocation of crop production subject to the restraining conditions of demand for agricultural products, cropland availability, and the institutional factors of government programs. Included in the analysis were several alternative farm programs directed toward specifying the production of wheat, feed grains, soybeans, and cotton. The study was designed to provide insights into the resource adjustments necessary to meet projected demands for these commodities in 1965. The criterion of least total cost of production and distribution of farm products was used for determining the optimum spatial allocation of production.

Previous Relevant Research. See previous abstract.

Method of Study. The farm policies considered in this study ranged from free markets to restricted programs involving mandatory reductions of wheat and feed grain acreages. Also included were linear programming solutions testing the effects of variations in demand for farm products, different pricing schemes for wheat, and retirement of sub-marginal as compared to average land within producing regions. The programming models featured 144 spatially separated producing regions to observe needed adjustments in resource use. These regions recognized the divergence in technological adaption, soil productivity, and climatical conditions existing across the United States. Each producing region had four potential producing activities (wheat, feed grains, soybeans, and cotton) from which the projected demand requirements were met. Cropland was considered to be the limiting factor of production in each producing region.

Also, 31 spatially separated demand regions were included, encompassing the entire 48 coterminous states. Demands for wheat, feed grains, and oilmeals were specified to reflect the projected trend in commodity requirements in each consuming region. A single national demand was used for cotton lint.

Major Findings. In the programming models 223.9 million acres of cropland were available for the production of the four major activities, feed grains, wheat, cotton, and soybeans. Consistent with the popular conception of the agricultural setting, there resulted some excess production capacity. This excess capacity was reflected by unused cropland in the programming models. Cropland diversion varied from 24.6 million acres for a mildly restrictive program on all crops and a very high product demand level to 52.3 million acres for an unrestricted feed grain program and a normal demand level.

Although various model solutions resulted in different amounts of excess land and different patterns of land use, there were some areas of chronic nonproduction throughout all farm programs considered. These areas were South Carolina, Georgia, and portions of Alabama, Mississippi, and Arkansas. In one instance, over 75 per cent of available cropland in these areas was idle and seldom was more than 50 per cent of the cropland employed. These are major regional aggregates with low yields, less efficient technologies and relatively small inefficient farms. Portions of Kansas, North Dakota, South Dakota and Idaho also had chronically under-employed land. This group included areas of fairly high yields but with relatively higher production costs. Little land was indicated for withdrawal in the major feed and livestock regions east of the Missouri River. Also fully employed under most programs were the major winter wheat regions and the field crop areas of the Pacific states.

The South Atlantic states became relatively more competitive and self-sufficient when wheat acreage quotas were abolished. Under this condition, these states produced feed wheat to substitute for previously imported feed grains. (NKW)

47. A BLUEGRASS LEAPFROG

Main Investigator: Roy W. Bahl, Jr.

Status of Research and Publications: Project is completed and published as a Bureau of Business Research monograph.

Agency: University of Kentucky, College of Commerce, Bureau of Business Research.

Previous Digest Report: None.

Research Problem. The study was undertaken (a) to identify and measure the economic costs of a leapfrog pattern of urban development, (b) to ascertain the incidence of these costs, and (c) to investigate factors which may explain the occurrence of a leapfrog development.

Method of Study and Findings. (Differential Cost Analysis) A Lexington, Kentucky suburb, separated from the urbanized area by two miles of completely idle land and including about 350 residences, afforded an excellent example of a leapfrog development. A hypothetical location, directly adjacent to the urbanized area, was posed for this subdivision. Thus any cost differential between the two developments may be assumed to be uniquely a function of location. Some of the more consequential of these "differential costs" include extensions of utility lines, fire and police protection, sanitary sewage, refuse collection, and private and public carrier commuting. In all, fourteen such costs were included in the analysis. While a case study, special consideration was given to those factors which did not approximate the normal situation in order to maintain the inductive value of the study. The findings of this section of the study were that in the short run (defined as that time period during which the land separating the subdivision from the urbanized area remains vacant) differential capital outlays total \$185,851 while annual differential noncapital costs amount to \$580,127. However since the intervening land may be developed in subsequent years, a long run model in which all differential capital costs were placed on an annual basis was developed by using an average annual cost of capital and straight line depreciation rate. In this framework, total annual differential costs are \$590,577. Using a linear approximation, this model suggests that the total differential cost to the Lexington area since the inception of this subdivision in 1956 is \$4,724,616. The approximate relative distribution of the incidence of the annual cost among residents and nonresidents of the leapfrog subdivision is respectively 60-40.

Method of Study and Findings. (Causal Factor Analysis) The Kentucky Department of Revenue appraised the intervening land at fair market value as of January 1, 1956 (the year in which the leapfrog occurred) and January 1, 1963. A comparison of these data with actual property tax assessments was the basis for testing the hypothesis that the owners of the intervening land received a tax advantage which made speculation lucrative enough to pay for withholding their land from the market. This analysis was accomplished through the development of a model based on the familiar equimarginal principle. Other factors which either contributed to the initial occurrence of the leapfrog or contributed to maintaining the idle state of the land since 1956 are personal idiosyncrasies, topographical considerations, governmental taxing, zoning, and other policies, and general economic factors. (RWB)

48. WORKING CLASS LIFE IN BOSTON - 1880-1960

Main Investigator: Stephan Thernstrom.

Status of Research and Publications: Research in process.

Agency: Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. An historical study of the changing social and economic position of selected working class residents of Boston between 1880 and 1960. An attempt will be made to isolate characteristic patterns of immigrant assimilation, residential mobility, and other forms of social mobility. The impact of changes in governmental policy since 1933 will receive particular attention. (ST)

49. THE MEDIEVAL MUSLIM CITY

Main Investigator: Ira M. Lapidus.

Status of Research and Publications: In process.

Agency: Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. To explain how Arab cities without either communal or administrative institutions were actually governed. The study concentrates on Cairo, Aleppo, and Damascus in the middle ages from 1250 to 1500 A.D. It explores the relationships between social structure and political processes by studying the role of each major class of the population in the functioning of the towns. One objective is to develop a style of analysis appropriate to comparative examination of pre-modern cities. (IML)

50. METROPOLITAN PLANNING IN THE UNITED STATES

Main Investigators: Charles M. Haar, Frank Colcord, Ralph Conant, Bernard Frieden, and William Nash.

Status of Research and Publications: Study has been completed. Multilith reports have been delivered to the United States Senate Subcommittee on Intergovernmental Relations.

Agency: Joint Center for Urban Studies, and The United States Senate Subcommittee on Intergovernmental Relations.

Previous Digest Report: 10:2-41.

Research Problem. This project was a study of the effectiveness of metropolitan planning in the United States today. The purpose of the study was to determine what improvements should be made in the organization and objective of metropolitan and regional planning agencies in the United States; to determine the political feasibility of a proposed federal requirement to review federal grant applications initiated by local governmental units by a metropolitan or regional planning agency; to determine what changes should be made in state legislation to advance the effectiveness of metropolitan planning.

Major Findings. The report comments on the political and organizational feasibility of comprehensive planning at the metropolitan level; points out a number of important changes that should be made in state legislation to improve metropolitan planning; and discusses federal responsibilities in the field. (RWC)

51. METROPOLITAN DATA CENTER DEMONSTRATION PROJECT

Main Investigator: Anthony C. Medin.

Status of Research and Publications: Project work program approximately 75% completed. An Interim Report was published in October, 1963, describing the origin of the Project, its work schedule and achievements to that date. A Final Project Report is scheduled for early 1965.

Agency: Metropolitan Data Center, supported by the Demonstration Grant Program of the Urban Renewal Administration, the Project involves five participating agencies in five states, each focusing on a different part of the overall planning process: The Planning Office of the City and County of Denver, Colorado (Comprehensive Land Use Inventory); the City of Fort Worth, Texas (Central Business District Planning); the Metropolitan Area Planning Commission of Pulaski County, Little Rock, Arkansas (School Facility Planning); the Tulsa Metropolitan Area Planning Commission, Tulsa, Oklahoma (Community Renewal Program and Related Urban Submittals); and the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas (Capital Improvement Program). The Project is being coordinated by a central staff, headquartered in Tulsa. This central staff is assisted by planning and EDP consultants.

Previous Digest Report: None.

Research Problem. The concept of metropolitan data centers has arisen from the need for better data for urban planning. Concurrent with increasing concern for better data, the capability of machinery to handle information has similarly expanded. The Metropolitan Data Center Project is exploring how expanding data processing equipment capability can be applied to handling data for urban planning. The Project has the task of testing (a) the feasibility of establishing, by the use of electronic data processing equipment, a metropolitan data center for the storage and analysis of information concerning land use, housing condition and occupancy, and related subjects, including environmental factors, and (b) the feasibility of maintaining the center so that the information may be kept up-to-date and be readily available to assist various local agencies in making sound decisions on urban planning and urban renewal problems.

Major Findings. The Project has developed to date: (1) A parcel record organized to satisfy the data requirement of each city's planning application and readily expandable to include data necessary for any planning application. (2) A computer program for accepting the data and for creating and updating the basic parcel record file; (3) A generalized

computer retrieval program to extract and provide data in any specified form and/or combination, and; (4) Each agency has identified those data needed for their specific application(s) and assembled these data for selected parcels. (5) Each agency has developed a system for maintaining these data current.

Remaining Work Items. The five agencies have just begun a test period where each agency will: (1) Enter the assembled data for selected parcels into the basic parcel record file. (2) Test the systems and procedures which cause the data to flow into the data center, and; (3) Test the retrieval program on these parcels and these data. It is being continuously stressed that compatibility among the several systems is to be maintained so that each agency can use the ideas and procedures developed by others. The computer programs serve all of these separate, but coordinated, systems. Once this system is operational, the Project will explore different organizational arrangements by which metropolitan data centers could be established to operate the system. (ACM)

52. DETERMINATION OF OPTIMUM LAND USE ON URBAN FRINGES

Main Investigator: James W. Gallagher.

Status of Research and Publications: In process.

Agency: Eastern Michigan University, Department of Geography.

Previous Digest Report: None.

Research Problem. To develop a set of formulae which will develop the ability to analyze land capability on urban fringes and to show its optimum economic use. The necessity for this comes from the obvious misuse and waste of many types of sites in urban areas. In the great outward movement of metropolitan communities, agricultural sites are wasted, residences are put anywhere options are available, industrial sites are lost, commercial areas spring up and fail because of poor location, and the total result is complete mismanagement of land.

Hypotheses. Any planning requires the development of a hierarchy of land uses. However, it is not necessary for different types of land uses to compete with each other in the urban area. Recreation and residences can represent similar site requirements but should not be put on lands suitable for other uses. Industrial sites, which are vanishing rapidly, should be mapped and reserved for future use if necessary. Commercial sites are available in desirable locations near consumers and do not have to ruin other types of sites. Agricultural land should be preserved. The basic hypothesis is that because of the long range importance of food production, prime agricultural areas must be maintained including those of the urban fringes. Its sites are not competitive and it represents an important part of the urban fringe economy. Industrial sites are equally important, but because of different requirements need not use prime agricultural land. Other land use types are in special categories because of site requirements and are grouped accordingly. Recreation and residential lands are an example of some of these.

Method of Study. (1) Mapping and classifying land uses in a thirty-six square mile township on the fringe of the Detroit metropolitan area. This area has been tabulated for all land uses on a square foot basis. (2) Classification of idle land. Some of this classification is as follows: a) trapped land, b) discontinued operations, c) soil bank, d) lost through freeway construction. The classification system has been found to be reliable in other areas on the Detroit fringe. (3) Still in process, is classification of suburbs on a land use basis. It appears that these are quite readily classified by the character of the commercial areas. The following, based on commercial areas, represent the suburb types: a) nucleated, b) dispersed, c) quality residential areas, d) multiple nuclei.

Next phase, to be started this Spring, will be an economic analysis of agriculture in the area. The following areas will be investigated on each farm: 1) farming costs related to crop yields; 2) land investments; 3) equipment investments; 4) soil type; 5) soil improvement possibilities; 6) methods of increasing yields. (JWG)

53. SPATIAL PATTERNS OF DEVELOPMENT IN THE LANSING REGION

Main Investigators: Thomas Borton, Stewart Marquis, Baron Moots.

Status of Research and Publications: Completed. Published in the following series of research papers: (1) Theoretical Regional and Local Trade Areas, 1960 by Baron Moots; (2) The Hierarchy of Retail Centers, 1960 by Baron Moots; (3) Changes in Retail Establishments and Retail Centers, 1947-1960 by Baron Moots; (4) Local Service Centers, Functions and Areas, 1961 by Stewart Marquis; (5) Industrial Activities Outside the Lansing Area, 1874 and 1961 by Stewart Marquis and Thomas Borton; (6) Market and Material Linkages of Industrial Firms Outside the Lansing Area, 1962 by Stewart Marquis and Thomas Borton; (7) Development of Community Centers, 1830-1960: An Analysis of the Evolution of Human Community Systems in the Lansing Tri-County Region by Stewart Marquis; (8) Basic Data on Number and Floor Area of Commercial Establishments Outside Lansing and East Lansing, 1940-1960 by Stewart Marquis; (9) Functional Profiles of Local Service Centers in the Tri-County Region 1960-62 by Stewart Marquis; and (10) Communities and Planning Areas: A Systems Approach to Spatial Community by Stewart Marquis. (Dates of publications: 1-3:April, 1962; 4 & 5:July, 1962; 6 & 8:August, 1962; 9:September, 1962; 10:February, 1963; 7:May, 1963).

Agency: Michigan State University, Institute for Community Development, under sponsorship of Tri-County Regional Planning Commission and Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. The major objective of this study was originally stated as the description of "local community patterns within the setting of the Lansing metropolitan region, with major emphasis on the spatial patterns and processes of social and economic change." The study was expected to add to general understanding of the process of community development and change in the region and to assist in the determination of local community areas appropriate for local and regional planning. The investigators also hoped to develop some new models and techniques which would be useful in the definition, identification and delineation of local communities for planning purposes.

Method of Study. The initial phases of the study, reported in Papers 1-6 and 8, involved the collection and analysis of information about the commercial, communications, transportation, education, health and welfare, general service, and industrial functions of local service centers in the region. These were all brought together in Paper 9 in the form of "functional profiles" of the centers and analysis of their internal and external service functions, and their service dependencies and deficiencies. The final phases of the study, reported in Papers 10 and 7, included the development of a systems approach to human communities and tentative testing of this approach in the delineation of community areas and analysis of the evolutionary stages of human community development in the Lansing region.

Major Findings. The following tentative conclusions were reached and reported on in Papers 10 and 7. Since these conclusions require considerable further refinement and testing, they can best be considered as hypotheses for further research.

1. The following operational definition was developed and reported on in Paper 10: "The community is a complex system of human, man-made and natural components located in a central place and its contiguous area and interacting through 'man-machine-resource' subsystems. The people of the community have internal control over certain major subsystems, and the ranges of these controlled major subsystems determine the boundaries of the community 'internal control area,' which also delineates the community planning area. The people of the community do not have internal control over the remaining major subsystems, and the ranges of those uncontrolled major subsystems determine the community 'interaction area,' which also delineates the community study area." Application of this definition to the Lansing region led to the identification of a hierarchy of human community systems, including the municipal-local, district, county and urban-regional.

2. The operational definition was refined and tested in the following form in Paper 7: "The human community is a complex ecosystem of human, man-made and natural components interacting through flows of materials, energy, people and information in 'man-machine-resource' subsystems and the central place and contiguous space within which the components and flows are located." This approach led to the tentative identification of five major evolutionary stages in the development of human community systems in the Lansing region, starting with dispersed

farm settlement and leading to the present urban-regional factory, farm and market community. This approach also emphasized the persistence of earlier patterns as each new stage became dominant. (SDM)

54. THE ALLOCATION OF WETLANDS IN THE UPPER MIDWEST

Main Investigator: Jon H. Goldstein.

Status of Research and Publications: Doctoral dissertation, in process.

Agency: University of Minnesota, Department of Economics, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Wetlands in the Upper Midwest have been depleted at a rather rapid rate during the postwar period, and the question arises as to the social advisability of allowing their disappearance to continue. Marsh lands, particularly those in Minnesota and the Dakotas, constitute the major breeding and resting grounds for waterfowl in the U.S. In the absence of these marsh lands, the wildlife population is likely to be reduced significantly, and duck hunting would virtually disappear as a result of the disruption of migratory habits.

It is frequently difficult for the owners of marshes to capture any significant portion of the benefits of their property when it is utilized for wildlife production. Assuming effective enforcement, state and federal regulations in the form of limited open seasons and bag quotas restrict the number of ducks which any hunter may seize. Hence wetlands owners as hunters are prevented from retaining all of the output of their land. The leasing of hunting rights has occurred to some extent but its effectiveness as a market mechanism is suspect. (Competition from free public hunting areas may make it impossible for private wetlands owners to charge a positive price for the use of their property.) These considerations suggest that there may be social costs involved in land reclamation (namely the lost wildlife population and the lost hunting areas) which are not considered by the land owners when they decide to engage in drainage.

When drained, wetlands prove fertile for agricultural purposes. Since the end of World War II drainage has resulted in the transfer of an estimated 4 to 5 million acres of wetlands to agriculture. This is accounted for by several factors. The cost of farming near and around wet areas has significantly increased. The wildlife which breed in the marshes sometimes feed on the farmer's crops, and represent a real increase in his production costs. The Agricultural Conservation Program of the USDA provides technical and monetary assistance to farmers, thus defraying part of the drainage expenses on eligible land. Crops grown on the drained land become available for subsidies under the price support programs. Since it is likely that no adequate market mechanism exists by which the benefits of wetlands in their natural state can accrue to marsh owners, and since the presence of wetlands represents a diseconomy to the farmer, an incentive to convert the wetlands into arable acreage exists as long as the private cost of drainage is less than the land's expected monetary yield from cultivation plus the cost savings as a result of the drainage.

The question which I wish to investigate is whether, given freely competitive prices in the farm sector, a misallocation of land between the wildlife and the agricultural sectors still persists. In order to answer this question one must evaluate the output of the land when it is devoted to the production of wildlife and recreational hunting areas, and compare the net social benefits from such production with the net benefits derived from committing the land to additional agricultural production.

Method of Study. The agriculture sector is relatively well defined. Formulating a demand relation for the output of the land when it is devoted to producing recreational hunting facilities is a somewhat more formidable problem. The most promising approach to estimating such a function is based on a method for evaluating national parks suggested by Marion Clawson (Methods of Measuring the Demand for and Value of Outdoor Recreation, Resources for the Future, Feb. 1959). (JHG)

55. / ASSESSMENT AND TAXATION OF REAL ESTATE IN THE FLORISSANT AREA OF ST. LOUIS COUNTY, MISSOURI

Main Investigators: Fred Dopson, Frank Miller, Fred Stocker, Thomas F. Hady.

Status of Research and Publications: In process.

Agency: University of Missouri, under sponsorship of Farm Production Economics Division, Economic Research Service, USDA.

Previous Digest Report: None.

Research Problem. (1) To determine the effects of urban expansion on rural and rural-urban real estate taxes, and on land ownership and use in an urban-fringe area; (2) To compare assessment practices on urban, urban fringe and rural lands for the purpose of determining whether inequities exist; (3) To evaluate alternative methods of assessment; and (4) To develop standards that can be used to make the property tax more nearly equitable in areas where inequities exist.

Method of Study. The following types of information have been assembled and are being analyzed: (1) The trend of assessments and taxation in the Florissant area; (2) changes in the ownership pattern of farm land; (3) changes in the land use pattern; (4) assessed valuations of land under varying types of ownership, present use and potential future use; (5) market value of land by size of tract; and (6) changes in market value of a tract throughout the transition period from agricultural to urban use.

Hypotheses. (1) Land owned by a farmer and used for agricultural purposes is assessed higher than when in the hands of a developer who is holding it for or in process of transfer to urban uses. (2) The assessment of land in or near the urban fringe is low in relation to market value, but high in relation to use value. (3) Proximity to urban development changes the ownership pattern of farm land. (4) Per acre real estate taxes in fringe areas, in some instances, have reached levels which preclude

the profitable use of land in agricultural production. (5) A capital gains tax can be used to supplement the property tax with no loss in public revenue and without discouraging entrepreneurs from developing new residential and industrial areas. (6) Substantial changes in assessment laws may be necessary to correct inequities in the property tax. (FM)

56. METROPOLITAN ECONOMIC PROJECTION SERIES

Main Investigators: Mannie Kupinsky and Sidney Sonenblum.

Status of Research and Publications: Development of techniques and collection of basic data well underway. Representative group of 75 standard metropolitan areas under study. Indicators to be estimated for 1950, 1957, 1960, 1962, and 1976 are: employment, population and income.

Agency: National Planning Association.

Previous Digest Report: 10:2-57. (MK)

57. REGIONAL ECONOMIC PROJECTIONS SERIES

Main Investigators: Sidney Sonenblum, Mannie Kupinsky, and Ahmad Al-Samarrie.

Status of Research and Publications: Revision of Regional Economic Projection Series in process. All indicators -- employment, labor force, net migration, population, output, and income -- are to be estimated for 1970 and 1975. States covered will now include Alaska and Hawaii.

Agency: National Planning Association.

Previous Digest Report: 9:2-56; 10:1-38; 10:2-59. (MK)

58. ECONOMIC SURVEY OF TOURIST-RELATED BUSINESS ALONG HIGHWAY 66 (INTERSTATE 40) IN NEW MEXICO, 1956-1963

Main Investigator: Paul W. Zickefoose.

Status of Research and Publications: Published November, 1963, as Bulletin No. 27, Engineering Experiment Station, New Mexico State University, University Park, New Mexico 88070.

Agency: New Mexico State University, Engineering Experiment Station, under sponsorship of New Mexico State Highway Department, Planning Division in cooperation with U.S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. An attempt has been made to establish a statistical and descriptive base from which changes brought by completion of the Interstate Highway System can be isolated and measured. Every tourist-related business on Highway 66 from Texas to Arizona (except in metropolitan Bernalillo County) has been included, whether located in an incorporated city, unincorporated village, or isolated site.

Previous Relevant Research. By author, studies of Tucumcari, Santa Rosa, Grants, and Gallup--the only communities of appreciable size. By up-dating and including the data collected for each of these communities with those for roadside businesses, a complete inventory of tourist-related businesses is presented within the limits of available data.

Hypotheses. (a) Since the Interstate System will be completed at rather widely separated intervals in various parts of the State, it may be possible to measure the extent (if any) to which tourist-related business diverted from a bypassed community will swell the volume of business in a competitive community still unaffected by highway relocation. (b) Even though temporary changes might thus occur, the net effect could not be ascertained until the System had been completed in all communities, at which time the interim findings might not hold true. (c) The methods and data available were at least sufficiently promising to justify such an attempt at objective measurement of the impact of the Interstate System upon each individual community.

Method of Study. Descriptive survey of the type and number of tourist-related businesses to be seen by a traveler across the State as of mid-1963, including photographs of representative establishments, and a mapping of all businesses by location and type. Employment data, in the absence of the more useful sales tax data, were analyzed for the cities and roadside businesses from 1956 through 1962 to show patterns by locality and industry as well as trends during the period of study. Gasoline gallonage was obtained from distributors for stations outside communities with gasoline taxes and frequency distributions, means, and medians, by general location were computed for the 67 stations in this category. Total sales of such stations were compared with those in the various cities to show the distribution of gasoline sales as of 1962 before the Interstate System had significant effect in the State. Finally, property turnover data were presented for roadside properties in tabular form by general location with number of sales expressed as percentages for 1956-1962. The location and land use at time of sale of each property sold was also plotted on a map. The few verified sales were plotted in value per front foot adjusted to a standardized depth.

Major Findings. Since this is a "before" project, the bulk of the findings will hopefully come upon completion of the Interstate System in the State. Certain interesting general findings can be reported on the basis of the present study, however. Employment in roadside restaurants and cafes was lower in 1962 than in 1956 (ranging from -10% to -38%), while the major cities reported increases ranging from +39% to +144%. This development occurred before significant changes could be attributed to the Interstate System. No close relationship was observed to exist between the level of activity in the three types of tourist-

related businesses--cafes, motels, and service stations--in a given community, although this would appear a reasonable expectation. The factors affecting the different types of business from year to year seem to be unique to a particular industry and community. Each of the categories reached a peak in a different year in a given community. It follows that indexes of employment and gasoline sales deviate widely from the index of average daily traffic. Property turnover data are inconclusive. Evidently there was no general influence at work across the State due to the present or anticipated influence of the Interstate System, since each year from 1956 through 1960 found real estate at its first or second highest level of turnover for at least two communities or categories. (PWZ)

59. THE ECONOMICS OF PRIVATE MOTOR TRANSPORTATION

Main Investigators: Arthur P. Hurter, Jr., and Walter Oi.

Status of Research and Publications: Final draft in preparation. To be published by Northwestern University Press 1964.

Agency: Northwestern University, Transportation Center, under sponsorship of firms in the transportation industries, and by other interested firms and labor unions.

Previous Digest Report: None.

Research Problem. (1) To investigate the growth of private motor trucking relative to for-hire trucking and other forms of transportation. (2) To determine the present interindustry and inter-regional distribution of private trucking. (3) To identify those characteristics of a firm's transportation problem that might lead the firm to use private carriage. Between 1939 and 1959 the growth of private trucking and for-hire trucking, measured in percentage increase in ton-miles per year, have been almost the same. (There was no statistically significant difference). There were, in 1961, statistically significant differences in the use made of private trucking across two-digit manufacturing industries. The size of the firm, the number of shipping points it operated and the average length of haul were the most important variables explaining the observed interfirm variance in the use of private trucking. The study is restricted to inter-city shipping by manufacturing firms. (APH)

60. TRANSPORTATION AND THE ECONOMY OF THE APPALACHIAN REGION

Main Investigators: Mitchell Harwitz and Arthur P. Hurter, Jr.

Status of Research and Publications: In process.

Agency: Northwestern University, Transportation Center, under sponsorship of Area Redevelopment Agency, U.S. Department of Commerce.

Previous Digest Report: None.

Research Problem. To develop analytical techniques suitable for evaluating alternative programs to aid depressed areas both in terms of their effect on the U.S. economy as a whole and on the depressed area. Since the government is restricted to certain kinds of changes in the transportation network, and to regional redistribution of its own purchases of goods and services the effort was directed toward evaluation of these alternatives. The evaluation was made in terms of the objectives of the overall economy and in terms of increasing the attractiveness of the depressed area for private investment. Two interregional linear programming models were developed. A major criterion of success for the study was its empirical applicability. Accordingly, considerable attention was paid to data problems. (MH)

61. ECONOMICS OF SOLAR ENERGY

Main Investigators: Richard Tybout and George O. G. Löf.

Status of Research and Publications: In process. Completion expected September, 1964. Publication will be decided by sponsor.

Agency: Ohio State University, Department of Economics, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Recent technological developments suggest some promise for future use of solar energy in less developed areas. The problem is to define solar energy costs with due respect for climatological variations and for optimum collector-storage combinations where energy storage is needed.

Hypotheses. (1) There are a number of regions in relatively populous areas of underdeveloped countries where solar energy can be used for motive power at less real social cost than any currently available alternative energy sources; (2) in various other places, such as Japan, solar energy can be used as a least-cost source of space heat and hot water heat.

Method of Study. Costs of solar technologies have been determined from two sources: (1) information reported at the United Nations Conference on New Sources of Energy (Rome, 1961); (2) mail survey questionnaires circulated by the authors. Climatological data have been obtained on IBM cards for 7 or 8 major classes of world climate from U.S. Weather Records Center. The data report hour-by-hour observations for selected full years. Mathematical analysis is being carried out through the Ohio State University Numerical Computation Laboratory. Energy costs in selected emergent nations are being compiled from U.S. Government agencies and other sources, some overseas. (RT)

62. ECONOMIC AND SOCIAL FACTORS AFFECTING HIGHWAY USE BY FAMILIES

Main Investigator: Charles Philip Gratto.

Status of Research and Publications: Doctoral dissertation, in final draft.

Agency: Pennsylvania State University, Land and Water Resources Research Institute, Highway Impact Study Group (Project WAMBY), under sponsorship of U.S. Bureau of Public Roads and Pennsylvania Department of Highways.

Previous Digest Report: None.

Research Problem. Three main questions were investigated (1) is there wide variation in highway use by households? (2) can variation in the propensity of households to use the highway systems be explained by variation in their social and economic characteristics? and (3) can a reliable predictive model of highway use for individual households be obtained?

Hypotheses. That the propensity of households to use the highway system is a function of household economic and social characteristics.

Method of Study. Data were obtained by household interviews in four selected areas of York County, Pennsylvania. Field procedures were those customarily used in Household Traffic Origin and Destination Studies. Standard correlation and regression techniques were used throughout the study. The dependent variable was auto driver trips per household per day.

Major Findings. Auto driver trips varied directly with household income and household wealth. A one percent increase in income was accompanied by a .19 percent increase in trips. A one percent increase in the number of automobiles operated by the household was accompanied by a .54 percent increase in the number of auto driver trips. A one percent increase in the number of employed persons was accompanied by a .28 percent increase in the number of auto driver trips. A one percent increase in the number of licensed drivers in the household was accompanied by a .48 percent increase in the number of auto driver trips.

Auto driver trips increased with increases in family size. Auto driver trips first increased and then decreased as age of head of household increased. Trips varied with stage in family cycle, increasing from a moderate level at formation of the household, increasing as the family moved to maturity, and declining sharply when the family reached the "empty nest" stage.

Households headed by white collar workers traveled more than those headed by blue collar workers. Households headed by persons in the labor force traveled more than households headed by persons not in the labor force.

Highway use varied greatly among households. Highway use depends on social and economic factors and levels of highway use are conditioned by extremely complex interrelationships among these factors. No reliable predictive model of highway use for individual households could be obtained. (CPG)

63. RELOCATION OF ELDERLY PERSONS

Main Investigators: Chester Rapkin and Mary K. Nenno.

Status of Research and Publications: Study as a whole still in process.
A first publication was issued last year entitled "Essays on the Problems Faced in the Relocation of Elderly Persons." 223 pp.

Agency: University of Pennsylvania, Institute of Urban Studies, and National Association of Housing and Redevelopment Officials, 1413 K St. N.W. Washington 5, D.C., under sponsorship of the Ford Foundation.

Previous Digest Report: 9:2-104.

Research Problem. Study as a whole is devoted to finding procedures for ameliorating the plight of elderly persons who are relocated because of urban renewal, highway construction and other government programs. Current phase of project involves demonstration projects in approximately five cities to test methods through which relocation of elderly persons can be facilitated. (SK)

64. HOUSING MARKETS AND PUBLIC POLICY

Main Investigator: William G. Grigsby.

Status of Research and Publications: Completed and published. See Housing Markets and Public Policy, William G. Grigsby, University of Pennsylvania Press, 3436 Walnut St., Philadelphia 4, Pa. 1963. 346 pp. \$6.50.

Agency: University of Pennsylvania, Institute of Urban Studies.

Previous Digest Report: 9:2-106. (SK)

65. PHILADELPHIA URBAN RENEWAL STUDY

Main Investigator: Janet Scheff Reiner.

Status of Research and Publications: Two year study, initiated in March, 1964.

Agency: Philadelphia Housing Association and Citizens Council on City Planning.

Previous Digest Report: None.

Research Problem. A study of the performance and impact of urban renewal programs in Philadelphia in terms of their stated objectives, using a "client analysis" technique.

Previous Relevant Research. Development and application of the technique in Puerto Rico and Philadelphia. See "Client Analysis and the Planning of Public Programs." Reiner, Reimer and Reiner, XXIX No. 4, Journal of the American Institute of Planners, (November, 1963).

66. AMERICAN METALS INDUSTRY STUDY

Main Investigator: Alan E. Fechter.

Status of Research and Publications: In process.

Agency: University of Pittsburgh, Center for Regional Economic Studies, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: 9:2-114; 10:2-56.

Research Problem. Metals producing and fabricating industries are concentrated in the Northeastern tier of States, known as the Manufacturing Belt, stretching from Massachusetts across the Great Lakes to Wisconsin. Spatial shifts have been occurring on a considerable scale within this set of states and between them and the rest of the United States. This study attempts to discover the causes of these shifts.

Hypotheses. An exploratory hypothesis has been developed that explains spatial mobility as a response to regional differentials in the rates of return to investment which are, in turn, influenced by regional differentials in demand and cost conditions. Further hypotheses that will be investigated are that different components of the metals producing and fabricating industries vary in their response to differentials in the rate of return to investment, and that demand and cost factors have differing influences on these rates of return between components.

Method of Study. Output and employment data are being drawn from the Census of Manufactures to describe the spatial shifts that have occurred between regions since 1899. These shifts will be compared with similar shifts in the non-metals manufacturing sector to determine whether they are primarily the result of underlying forces specific to the region or forces specific to this particular group of industries.

An intensive analysis of the post-war period has just begun in which spatial shifts in industrial activity are being related to the profitability of new investment expenditures. An attempt to explain regional differentials in the return to investment will be made in terms of regional differentials in demand, measured by an index of accessibility to markets, and costs, represented by labor costs differentials, an index of accessibility to raw materials, and internal and external scale economies.

The analysis will be done for the entire metals industry sector, consisting of industries classified by the Census, as primary metals, fabricated metals, non-electrical and electrical machinery, and transportation equipment, (S.I.C. 33-37) and separately for each 2-digit component. (AEF)

67. JURISDICTIONAL DISPARITIES BETWEEN COSTS AND BENEFITS TO LOCAL GOVERNMENTS OF AREAWIDE PROGRAMS IN METROPOLITAN AREAS

Main Investigator: Benjamin Chinitz.

Status of Research and Publications: In process.

Agency: University of Pittsburgh, Department of Economics, under sponsorship of Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. Appropriate allocation among local governments of responsibility for supplying or paying for areawide urban services. (SK)

68. COMMUNITY DEVELOPMENT - IMPROVEMENT OF LOCAL PUBLIC SERVICES

Main Investigator: John Hall.

Status of Research and Publications: In process.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Department of Urban Affairs.

Previous Digest Report: None.

Research Problem. Improving public services as a catalyst for general strengthening of neighborhood organization and rehabilitation efforts. (JH)

69. A HISTORY AND EVALUATION OF THE OHIO RIVER SANITATION COMMISSION

Main Investigator: Edward J. Cleary.

Status of Research and Publications: In process.

Agency: Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. A review and assessment of the record of the Ohio River Valley Water Sanitation Commission, of which Mr. Cleary has been Executive Director since it was founded in 1948. The study will trace the origin of ORSANCO, reveal how interstate agreement was achieved to establish the Compact, give a detailed review of how ORSANCO was able to deal effectively with at least the gross aspects of pollution in the Ohio despite its limited powers and finally assess the utility and future role of interstate compacts of the ORSANCO type. (EJC)

70. WATER ECONOMICS IN THE SUGAR BEET INDUSTRY

Main Investigators: George O. G. Löf and Allen V. Kneese.

Status of Research and Publications: In process.

Agency: Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. This study utilizes survey and engineering information to provide systematic information concerning the losses incurred by this industry as a consequence of low water quality and the methods and costs of water and effluent treatment. Also it endeavors to identify the scope for process change and waste reclamation as an alternative to the treatment of waste waters. In the sugar beet industry it appears that these procedures will be even more important than waste water treatment. The over-all purpose of the study is to provide loss functions for input water quality deterioration and costs of achieving various increments of waste reduction by an optimal combination of measures. (AVK)

71. AN ANALYSIS OF ALTERNATIVE POLLUTION CONTROL SYSTEMS FOR THE POTOMAC BASIN

Main Investigator: Robert K. Davis.

Status of Research and Publications: In process. Publication expected in 1965.

Agency: Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. The comprehensive plan for development of the water resources of the Potomac River, recently presented by the U.S. Corps of Engineers, is the first river basin planning effort in which problems of water quality and of recreational uses of streams and lakes assume the leading position. To an increasing extent these two considerations will tend to dominate water resources planning throughout the East. Because it is difficult to measure some of the costs and returns involved in programs concerned with water quality and recreation, it is desirable to understand the possible choices that are open to the public. The questions addressed in the first stage of this study of the Potomac Plan are: (1) How would the plan have been different if a wider range of alternative outcomes or specific objectives had been explored in the study? (2) Did jurisdictional, analytical, institutional or other deficiencies prevent the Corps from identifying the economically optimum system for achieving a given set of objectives?

Method of Study. Alternative water resource systems will be developed from the basic data provided by the Corps and other agencies to illustrate how options not now available to river basin planners might

change the nature of the optimum system. The options being explored include waste treatment and diversion and different water quality standards.

Subsequent stages of the study may include attempts to estimate benefit functions explicitly for such system outputs as M&I water, quality improvement and recreation in an effort to define more nearly an optimum system for the Potomac. (RKD)

72. A MODEL OF WATER DEMAND FOR THERMAL ELECTRIC POWER GENERATION

Main Investigators: Paul H. Cootner and George Lbf.

Status of Research and Publications: Completed. To be published in 1964 by Johns Hopkins Press.

Agency: Resources for the Future, Incorporated.

Previous Digest Report: None.

Research Problem. To investigate technological and economic determinants of thermal power water demand and to express them in a way which would permit water basin planners to incorporate them in forecasts of water demand.

Method of Study. Study develops technological relations between factors affecting power efficiency. It then converts these into economic supply and demand curves for "thermal efficiency." Since cooling water use by power plants is related to the waste heat disposal, determination of optimal efficiency yields estimate of required water circulation. Then, similar technological--economic procedure is used to determine water economizing by cooling towers.

Major Findings. Water use by steam plants per kwh has declined substantially in past years due to improvements in thermal efficiency of power generation. Such improvements are unlikely to continue for economic reasons. But water recirculation techniques are cheap enough so that water requirements will not seriously restrict power generation programs or raise costs appreciably. (PHC)

73. A STUDY OF THE ECONOMIC EFFECTS OF THE EMPORIA INTERCHANGE, BYPASS, AND BUSINESS LOOP

Main Investigator: Ira F. Doom.

Status of Research and Publications: Report completed. Publication plans not stated.

Agency: Virginia Council of Highway Investigation and Research, Charlottesville, Virginia, under sponsorship of U.S. Department of Commerce, Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. To determine and analyze changes in distribution and volume of business, land and improvement values, and land use patterns induced by construction in 1958 of a bypass, interchange, and business loop on Interstate Route 95 at Emporia, Virginia.

Previous Relevant Research. An investigation of previous bypass and interchange studies (most of which are listed in the bibliography) was conducted in order to provide a basis for determining the most fruitful approach to this study.

Method of Study. All data used in identifying and evaluating effects of construction of the new highway facilities were obtained for periods before and after this construction.

To determine changes in distribution and volume of business retail sales statistics were collected for businesses in town of Emporia and surrounding county (Greensville). Businesses were originally classified according to type of operation; i.e., gas stations, restaurants, clothing stores, etc. Results of analysis were inconclusive, so data were reassembled and divided into two categories, highway and non-highway oriented businesses. This grouping proved more beneficial for analytical purposes.

To determine effect of new facilities on land and improvement values, property sales, building permit, and assessment statistics were collected and analyzed. Criteria used in evaluating changes in trends of these data were economic base of Emporia and location of land and improvements relative to distance from and accessibility to newly constructed highway facilities. Similar criteria were used in analysis of changes in land use patterns.

Major Findings. (1) Economic development around new highway facilities has been rapid but has been limited to a small area and for the most part to highway oriented business some of which has been redistributed from center of Emporia. (2) Aside from this limited development, large amounts of land near the interchange remain vacant. (3) Land and improvement values have increased sharply near interchange at north of Emporia and business loop at south of town but the already existing decreasing trend in these values between the interchange and business loop has been accelerated by construction of new highway facilities. (4) Economic impact of highway construction has not yet been fully reflected in available statistics because of short duration of "after" period but it is estimated that impact will be considerably less significant and widespread than it would have been had the area possessed more resources and been located nearer to large population centers. (IFD)

74. ECONOMIC EFFECTS OF URBAN RENEWAL

Main Investigator: Hugh O. Nourse.

Status of Research and Publications: Study completed. Publication plans indefinite.

Agency: Washington University (St. Louis), Department of Economics.

Previous Digest Report: None.

Research Problem. Urban Renewal is said to benefit the community because it raises the tax base. It raises the property values of the renewal area and its environs. Since renewing for occupancy by the former slum occupants will not raise property values, and will, therefore, not be profitable, urban renewal projects have been for higher income families, rolling back segregation boundaries, or the building of commercial and industrial properties. The former occupants, however, must move elsewhere, which may imply a reduction of values in the neighborhoods of the city to which they move. This study is an attempt to investigate whether there is a net increase in the tax base as a result of urban renewal.

Previous Relevant Research. To my knowledge no one has handled this specific problem. Only Martin Bailey in "Note on the Economics of Residential Zoning and Urban Renewal," Land Economics, XXXV (August, 1959), pp. 288-292, has even attempted theoretically to take account of the effect of urban renewal on total community property values.

Method of Study. A case study of St. Louis was investigated. Between 1950 and 1960 a large Urban Renewal Area was cleared, and the occupants had to move elsewhere. A regression analysis attempting to explain the change in property values and rents from 1950 to 1960 in census tracts of the City of St. Louis was made, in which one of the independent variables was a dummy variable, valued 0, if urban renewal migrants did not move to the tract, 1, if the migrants did move to the tract. In addition, the association between other important factors in neighborhood differentials in rent and value changes and urban renewal migration were investigated.

Major Findings. Changes in income, condition of housing, and race, were significantly associated with either changes in rent or value. Although Urban Renewal migration was not significantly associated with changes in rents and values directly, it was associated with changes in income and race. Although there is no evidence to justify the hypothesis that former residents of urban renewal areas caused rents and values to decrease in the neighborhoods to which they moved, there is no proof that rents and values were unaffected by the migration. Further evidence on the numbers of migrants from an urban renewal project area to each neighborhood is needed before one may conclude that urban renewal may increase property values in the project area without lowering values elsewhere in the City. (HON)

75. GUIDELINES FOR DETERMINATION OF COMMUNITY CONSEQUENCES OF HIGHWAY IMPROVEMENTS

Main Investigators: Edgar M. Horwood and Myer R. Wolfe.

Status of Research and Publications: In process. Publication in the form of a report to the Highway Research Board and papers to be presented at the annual meeting of that group expected in summer of 1964 and January, 1965, respectively.

Agency University of Washington, Departments of Civil Engineering and Urban Planning, under sponsorship of American Association of State Highway Officials, administered through the National Academy of Sciences - National Research Council by the Highway Research Board.

Previous Digest Report: None.

Research Problem. This project is concerned with identifying and predicting community consequences arising from highway improvements. This study will seek out both favorable and unfavorable consequences and will involve evaluation of existing economic impact studies, developing of guidelines for highway agencies to follow in these studies, and the outlining of urgent aspects of this problem needing detailed research.

Method of Study. The library of existing literature is being automated using a system based on the IBM Keyword-in-Context (KWIC) method for rapid retrieval of subject matter for substantive analysis and evaluation. Case studies are also being conducted in such freeway impacted areas as Los Angeles and New York's "Mohawk Corridor." (CAZ)

76. CENTRALITY OF URBAN LAND VALUES AND USES

Main Investigator: Warren R. Seyfried.

Status of Research and Publications: In process. Completion expected fall, 1964.

Agency: University of Washington (Seattle), Department of General Business, under sponsorship of Management Science Institute and National Highway Research Board.

Previous Digest Report: None.

Research Problem. To develop a measure of value, or rent, differentials within urban land market, i.e., a measure of sensitivity of land use patterns to market forces and factors. Such measure would be useful for measuring effect of location and quality of a transport route, e.g., an arterial or freeway, upon spatial distribution of land uses and values within an urban area.

Previous Relevant Research. Use of measures of concentration and centralization of urban land values as a sensitivity indicator was reported in "The Centrality of Urban Land Values," Land Economics, Vol. XXXIX, No. 3, August, 1963.

Hypotheses. That competition for urban sites among alternative uses results in rent, and that rent differentials arise largely because of transport or accessibility costs and external economies of aggregation of complimentary functions. Equilibrium is achieved when distributive process, i.e., the price mechanism, allocates sites among users so that productive capacity of sites is optimized, transport costs minimized, thus rents maximized. Firms and households would not have any economic motive to change location. A cross section of the rent surface of sites should reveal

degree of rent differentials, for rents vary functionally and inversely with accessibility costs. Those sites at locations where accessibility costs are least demand the highest rent. Higher accessibility costs but lower rents are required from preempted users so that a gradient of rent differentials characterizes the rent surface or structure. Of course, institutional factors also have an effect on the gradient.

Change in the rent surface occurs as the economic base shifts, expands or contracts. Internal factors also result in shifts of the rent surface. For example, a change in transport routes that reduces accessibility costs of effected sites will generate a shift in rent differentials, hence use, of the entire urban area.

Method of Study. The methodology of the study is comparative statics by use of cross sectional data. The technique used to measure the rent surface of an urban area is the ordering of percentage distributions of unit site value and area, computing a measure of the variation from equal distribution, and also graphically by use of Lorenz curves. Other variables than value and area will also be analyzed. Concentration measures indicate the relative degree of agglomeration of site use, and centralization measures the degree a specific location, e.g., the central business district or a highway, effects the rent surface.

Major Findings. Grouping value and area data for sites by Standard Industrial Classification numbers reveals a high degree of concentration in groups of industries, e.g., manufacturing, as well as centralization relative to the central business district. (WRS)

77. THE ELASTICITY OF SUBSTITUTION, REGIONAL WAGE DIFFERENTIALS AND STRUCTURAL UNEMPLOYMENT IN URBAN ECONOMIES

Main Investigator: Frederick W. Bell.

Status of Research and Publications: Doctoral dissertation, completed and accepted for publication in part by 1) The Review of Economics and Statistics (1964) and 2) The Southern Economic Journal (1964).

Agency: Wayne State University, Department of Economics, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. A crucial assumption in many problems of economic analysis is degree of substitution between capital and labor as factors of production. Purpose of dissertation is three-fold: (1) to estimate actual degree of factor substitution between capital and labor (for 100 two and three-digit U.S. manufacturing industries) using constant elasticity of substitution (CES) production function; (2) to appraise role of factor proportions in explaining regional wage differentials between standard metropolitan areas and states; and (3) to analyze role of factor substitution in contributing to displacement of labor and unemployment in Detroit Metropolitan Area.

Source of Data. Data were obtained from 1958 Census of Manufactures; Annual Survey of Manufactures (1948-61) and Detroit Labor Market Letter, 1949-61. Data consist of observations on such variables as value-added, production man-hours, capital stock, plant and equipment expenditures and rates of unemployment.

Method of Study. Research was approached by first formulating neo-classical model of factor substitution along with necessary underlying assumptions. Method of ordinary least-squares was employed in single equation estimation of elasticity parameter of CES production function (cross-sectional data--states and SMSA's). A simultaneous equation model was also developed to estimate production elasticity for Cobb-Douglas production function. This model showed interaction of factor prices and production function across regions. Finally, a regional unemployment model was constructed and tested using ordinary least-squares. This model evaluated interaction of neutral technical change, factor substitution and effective demand in explaining declining demand (or trend) for production workers in Detroit economy (time series data employed).

Major Findings. There is every indication that factor substitution both regionally and over time is very prevalent. Actual elasticity of substitution was found for most manufacturing industries to be in neighborhood of Cobb-Douglas hypothetical value of unity. Use of a "short run" time series tended to lower elasticity point estimates below unity, but they were not statistically different from unity.

Regional wage differentials were found to be result of differences in factor proportions. High wage regions within an industry tended to use more plant and equipment per man-hour than low wage regions in producing a similar product. Wages, productivity and the capital labor ratio across regions seemed to interact as conventional neoclassical postulates would dictate.

Finally, labor displacement in Detroit economy was found to be result of high labor productivity (changes in factor proportions accounted for approximately 25% of productivity increases) and slackening effective demand. This situation coupled with relative labor immobility led to chronic (non-Keynesian) unemployment in the metropolitan area. Neutral technical change (aside from factor substitution) was found to be principle source of labor displacement. Results of Detroit study (of structural unemployment vs. effective demand) indicate that both macroeconomic (e.g., tax cut) and microeconomic (e.g., man-power retraining) policies are necessary to combat chronic unemployment. Ability of labor market to handle rapid displacement due to interaction of productivity and effective demand is greatly questioned. (FWB)

78. THE IMPACT OF INDUSTRY ON LOCAL TAXES

Main Investigators: Harold M. Groves and John Riew.

Status of Research and Publications: Study as a whole in process. This portion completed and published as "The Impact of Industry on

Local Taxes - a Simple Model," in National Tax Journal, Vol. XVI, No. 2., pp. 137-146. (June, 1963).

Agency: University of Wisconsin, Department of Economics.

Previous Digest Report: None.

Research Problem. An intensive examination of metropolitan finance in Wisconsin, covering 12 largest cities and their suburbs.

This segment is an exercise in reckoning fiscal advantage (dis-advantage) of industry to a community under conditions of full employment. Advantage (disadvantage) depends largely on four variables: (1) additional expense (direct and indirect) associated with the industry; (2) capital-labor ratio; (3) level of wages paid (which in turn is associated with residential property of employees); and (4) quantitative and qualitative dispersion of labor force and investors to other districts.

Method of Study. Relationships are reduced to formulas and applied to City of Madison and one of its industries. Important to conclusion are facts that the industry is reasonably capital intensive, pays better-than-average compensation to its working force, and employs a considerable portion of employees who live in other districts and who receive only about average pay for the entire group of employees. It is estimated that this industry reduces the local full-value tax rate by 1.13 mills out of a total property tax rate of 27.02 mills.

The authors warn, however, that their analysis should dispel the widespread illusion that all industrial development of any sort under any conditions is always fiscally advantageous.

This study was incident to a larger project in which metropolitan finance in Wisconsin (covering the 12 largest cities and their suburbs) is being intensively examined. (HMG)

79. WILDERNESS AND THE AMERICAN MIND

Main Investigator: Roderick Nash.

Status of Research and Publications: Doctoral dissertation, completion expected August, 1964. Brief examination published as "The American Wilderness in Historical Perspective," Forest History VI (Winter, 1963) 2-19.

Agency: University of Wisconsin, Department of History, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Delineation, interpretation and analysis of American attitude toward wilderness. To discover the meaning of the idea

and the physical fact of wilderness to the earliest colonists and upon this base to erect a discussion of the thought of subsequent generations. Changes in attitude over time and reasons for these shifts constitute the heart of the study.

Hypotheses. That American attitudes did not remain the same but changed with changing conditions and the impact of new ideas. Moreover, the change, in general, has been toward a more favorable estimation of wilderness.

Method of Study. All techniques of historical investigation have been applied to a wide range of source materials including travel literature, fiction, journalism, natural history and pioneer reminiscences. Three of ten chapters focus on individuals who did much to advance and shape the thought of their contemporaries about wilderness: Henry David Thoreau, John Muir and Aldo Leopold. Two others concern major controversies over particular wilderness areas which have elicited considerable national discussion: Hetch Hetchy Valley in Yosemite National Park (1913) and Echo Park Dam in Dinosaur National Monument (1950-55).

Major Findings. American attitude toward wilderness from colonial times to the present may be best described as ambivalent, a combination of repulsion and attraction. On the one hand, Western culture contained deeply-rooted ideas which defined wild country (especially the forest) as abode of evil spirits, a place cursed by God and, when possible, shunned by man. Adding to repugnance was role of wilderness as enemy of civilization and progress. Such notions were hard to dispel, but gradually a contrary set of ideas gained strength beneath the hate, fear and indifference. New developments in aesthetic theory, the advent of romanticism and primitivism, and the growing tendency to view nature as a manifestation of God promoted a more favorable assessment. Moreover, Americans began to feel that pioneering was one of their primary achievements, that wilderness was essential to pioneering, and that the most distinctive and admirable traits of national character stemmed from contact with wilderness. As the virgin continent disappeared, appreciation of it increased. Wild places appealed as a welcome relief from an oppressive civilization, a source of inspiration, aesthetic gratification and mental and physical reinvigoration. Recently, many have regarded wilderness as a last outpost of natural beauty and sentiment in the face of a devouring utilitarianism. But these same Americans are intensely proud of the material achievements of their nation, primary among which has been the conquest of the wilderness. Although appreciation has grown, a double-mindedness persists. It compounds the difficulty of evaluating the claims of wilderness and civilization in an attempt to formulate a national policy of wilderness preservation. (RN)

80. GEOGRAPHIC MOBILITY OF WISCONSIN WORKERS

Main Investigators: Gerald G. Somers, Archie Kleingartner, Graeme H. McKechnie, and Collette H. Moser.

Status of Research and Publications: In process. Publication expected by University of Wisconsin Press.

Agency: University of Wisconsin, Industrial Relations Research Center, in cooperation with Wisconsin State Employment Service and Wisconsin Survey Research Laboratory.

Previous Digest Report: 10:2-91.

Research Problem. (1) Who are the geographically mobile workers and how do they differ from less mobile workers? (2) What are the attitudes of the mobile workers toward work and community and what motivates their mobility? (3) What are the gains and costs of geographic mobility--for the worker, the community, and the economy? (4) How useful are income tax returns for analyses of mobility?

Method of Study. The basic data for this study are derived from a survey of 210 male in-migrants who came from outside a fifty-mile radius into Madison and Milwaukee, Wisconsin between January, 1955 and December, 1960. The sample was drawn from the files of the Wisconsin State Income Tax Department where income tax data are filed by name for approximately 14 years. The names of the in-migrants were chosen randomly from the files and interviewing was completed in the summer of 1962.

Comparison data were drawn from a study of 2000 adults made in 1960 in Wisconsin's Fox River Valley. For the purposes of the geographic mobility study, a subsample of males was selected containing both mobile and non-mobile workers.

Major Findings. The geographically mobile workers are younger and better educated than non-mobile workers. In addition, the mobile workers are heavily represented in the professional, technical and managerial occupations. The family incomes of the mobile workers are higher than those of the non-mobile workers, and the incomes of the workers in Madison and Milwaukee are higher than in the Fox River Valley.

Geographically mobile workers have a higher propensity to change jobs and locations in order to advance in their work than non-mobile workers. In addition, a substantial proportion of the mobile workers gave evidence that they will consider moving again in the near future. Employment conditions--to get a job or a better job--were the primary motivation for the move to the two cities.

The mobile workers feel that the major gains accruing from their geographic movement are economic; better jobs and higher living standards. The major losses are social and cultural; friends, relatives, and community relations. In an objective comparison between the migrants' pre-move and post-move status', relative gains were made in higher earnings and socio-economic status. The communities also benefitted since the in-migrants were both highly educated and highly skilled.

Income tax returns constitute a unique and highly useful source of data for mobility research. They offer a readily-obtained and reasonably reliable sample of mobile workers. Although there are limitations in their usefulness for the analysis of occupational and industrial changes, the

forms provide valuable information on geographic mobility and permit a useful check on the reliability of survey responses concerning income and previous residence and employment. (GHM)

81. SOUTHERN LAND USE PROJECTIONS

Main Investigators: G. S. Tolley and R. N. Harris.

Status of Research and Publications: Final calculations remain for completion of projections for southern subregions. Publication in probable journal article form is expected in two to three months.

Agency: North Carolina State of the University of North Carolina at Raleigh, Department of Agricultural Economics, under sponsorship of Resources for the Future, Inc.

Previous Digest report: None.

Research Problem. Hypotheses concerning land use changes were formulated in a previous study (Cropland Reversion in the South, 1963) through analysis of subregional farm acreage adjustment and land abandonment. These hypotheses are used to make judgments about the type of farm distribution at future dates, in reference to twenty-three economic areas.

Technological disfavorment particularly in cotton production is a major factor depressing crop acreage. This is modified by subregional adjustability factors of tenure--race, age and alternative agricultural opportunities. A second major impetus, nonfarm opportunities, is likewise modified by the same adjustability considerations.

Information about the nature of changes is supplemented by trend data to form profiles of land use in 1975, detailing cropland harvested, land in farms, and major crop acreages.

Subregional projections are adjusted to conform with available national projections and are checked against migration, spatial equilibrium and constant trend studies. Besides allowing a fresh approach to land use prediction, the method is able to evaluate the conservative Needs Inventory of the Soil Conservation Service which presents, as an integral part, county projections of land use in 1975. (GST)

82. INDIVIDUAL AND AGGREGATE BENEFITS AND COSTS OF SOIL CONSERVATION IN THE SOUTH

Main Investigators: H. W. Grubb and G. S. Tolley.

Status of Research and Publications: Following completion in January, 1964, the study will be published in mid-1964 as a North Carolina State Agricultural Economics or Technical Bulletin.

Agency: The study was part of a larger project, "The Relation of Soil Conservation to Economic Development in the South," sponsored by Resources for the Future, Inc. and North Carolina Agricultural Experiment Station and carried out by the Department of Agricultural Economics, North Carolina State of the University of North Carolina, Raleigh.

Previous Digest Report: None.

Research Problem. The study analyzes systematically conservation measures to ascertain whether benefits properly valued exceed the costs of the conservation inputs on the aggregate level and on the farm level where subsidies are apparently necessary to induce farmer participation.

Method of Study. Soil savings and net benefits to soil conservation are estimated for each of four states in the South (Alabama, North Carolina, South Carolina, and Tennessee) noting subregional differences within these states. Soil savings estimates were made from a sample of 448 farms from 30 representative counties, using a recently developed USDA soil loss prediction equation to estimate soil savings.

A benefit-cost analysis was carried out for the purpose of estimating present value of net farm income without and with soil conservation plans, the difference being an estimate of net benefits to conservation. Net benefit estimates were made from 180 sample farms in 12 of the original 30 counties.

Major Findings. Soil savings estimates were positive in practically all 30 counties. Estimated annual savings in millions of tons were 65.6 in Alabama, 22.8 in North Carolina, 16.8 in South Carolina, and 27.4 in Tennessee.

Estimated net benefits were positive for nine of the twelve counties studied, but farm-to-farm variability was so great that net benefits for only two of the twelve counties could be considered significantly different from zero. This finding held for interest rates ranging from .001 to .09 and for time horizons ranging from five to one hundred years. Thus, only a small proportion of counties had net benefits greater than zero.

From a case study of 24 sample farms it was found that separate benefits to terracing were negative on 17 to 23 of the farms (depending on interest rates and time horizons); benefits to crop rotation changes were positive on 17 to 21 farms. The same 24 cases indicated, under the assumption that yields are 10 percent lower with low management than with high management, that net benefits to conservation were under high management.

Major policy implications of the study are that terracing should be de-emphasized and technical assistance to raise management levels should be increased if benefits to conservation are to be increased. In addition, the incidence of both positive and negative individual farm benefits in all counties studied suggests that farm plans should be considered on an individual basis. There appears to be potential gains from a benefit-cost analysis of each farm plan, since some plans with negative benefits could possibly be eliminated. (GST)

83. BENEFIT-COST EVALUATION FOR LAND USE PLANNING

Main Investigators: G. S. Tolley, C. Harrell and R. N. Harris.

Status of Research and Publications: The variables considered important to urban and recreation land are included in theoretical models which are currently being tested and modified by application to Raleigh, North Carolina. Measurement of project benefits by transport cost saving and land value changes is being investigated. Study completion is scheduled for October. Publication as journal article is anticipated.

Agency: Department of Agricultural Economics, North Carolina State of the University of North Carolina at Raleigh, North Carolina. Sponsored by Resources for the Future, Inc., with North Carolina Agricultural Experiment Station as a cooperating agency (H-274).

Previous Digest Report: None.

Research Problem. 1) The study is developing planning criteria for spatial changes connected with recreation and urban competition for land. 2) The criteria will be applied to selected situations in the South.

Method of Study. Parks will be considered for which Clawson-Hotelling demand curves can be estimated. Subtracting the area under the demand curve from costs of each park will give an estimate of the social benefits needed to justify the park. Theoretical models are being constructed showing how non-market effects and economies of spatial association influence urban land rents. There will be analysis of how the benefit-cost ratio of a project changes through time depending on starting date. Empirical applications are underway for areas including such cities as Savannah, Raleigh or Knoxville. Basic income generating activities are taken as given. Benefit-cost estimates for alternative planning decisions will be made for park systems, fringe zoning and highway-transit layout. Data will be analyzed on land values from census and tax records, park visitations, traffic counts, housing counts, housing conditions and density, and demographic characteristics. (GST)

84. REGIONAL INVESTMENT ALLOCATION CRITERIA

Main Investigator: Thomas A. Reiner.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Department of Regional Science, and the Regional Science Research Institute.

Previous Digest Report: None.

Research Problem. While economic and planning literature show considerable thought and research regarding identification of industrial sectors where investment is most efficient, very little has been written on investments' regional aspects in a normative framework. (Although every investment decision has, of course, a de facto spatial dimension, this commonplace is barely recognized.) Decision makers, particularly in developing countries, are heavily involved in the regional aspect of investment decisions, an issue with considerable political overtones. One problem is that criteria, which actually are relative value positions, are usually presented as absolutes. There is great need and interest in joining the political and economic phases of the issue.

Three phases of the problem are being studied: 1) An analytic investment model with regional dimensions is being developed; alternate spatial criteria explicitly included as variables (e.g., allocate to equalize per capita incomes between regions, or allocate in proportion to population size). 2) National development plans are being studied for their spatial investment criteria and investment patterns. 3) The state-by-state distribution of U.S. grants-in-aid is being analyzed; such grants are thought of as a significant instrument for spatial involvement by the national government.

Previous Relevant Research. In addition to the extensive literature on industrial and sectoral investment criteria (e.g., works by H. B. Chenery), two very recent Harvard Ph.D. theses have investigated optimal regional allocations (Bhatia and Rahman). The above Principal Investigator has presented the outlines of a model in two papers (Cuadernos Sociedad Venezolana de Planificacion, September, 1963; Papers, Regional Science Association, vol. XI) based on his Ph.D. dissertation. The regional elements of national development plans, so far as is known, have not been the subject of any comparative study as yet; the first steps of this research will be reported to the eleventh meetings of the Regional Science Association, Ann Arbor, November 13-16, 1964. Spatial impacts of grants-in-aid have been analyzed as part of larger studies of the Legislative Reference Service (Federal Revenues and Expenditures in the Several States, I.M. Labovitz, 1962) and the Upper Midwest Economic Study (Technical Paper #3). Forthcoming articles issuing from this study will concentrate on the extent to which the programs are consistent with the stated objectives (criteria) and with certain overall welfare ends.

Hypotheses. With regards to the grant-in-aid study, we shall test the proposition that grants-in-aid do serve stated welfare objectives. No formal hypotheses at this point are envisaged for the first two portions of the study. These phases of the project will proceed in a developmental and exploratory manner.

Method of Study. A theoretical regional allocation model is being built up in the language of economic analysis. Alternative hypothetical investment patterns are tested for their impacts (e.g., via a simple interregional input-output model). The political and value implications will be verbally discussed. The regional elements of national economic and development plans are being investigated by careful reading of the published documents. Where possible, investments pursuant to the plans are tabulated by location, thereby affording an opportunity

to pit explicit regional allocation criteria against the actual investment pattern. A similar form of analysis is involved in the grants-in-aid portion of the study.

Major Findings. Study of the model shows that pursuit of different (though equally tenable) regional objectives as expressed via allocation criteria leads to differential allocation patterns; these have mutual opportunity costs. (No findings on the other studies can as yet be reported.) (TAR)

85. PRESENT AND POTENTIAL ROLE OF STATE AND LOCAL TAXATION IN PRESERVATION AND DEVELOPMENT OF OPEN LAND IN URBAN AREAS

Main Investigators: John E. Rickert, with the collaboration of Jerome P. Pickard.

Status of Research and Publications: An annotated bibliography listing 300 items has been completed and manuscript submitted for probable publication by the Housing and Home Finance Agency. Work is continuing on the second phase of the project: analysis of land economics theory related to the subject. Field work is to be undertaken during the Summer of 1964.

Agency: Urban Land Institute, under sponsorship of Housing and Home Finance Agency.

Previous Digest Report: (10:2-87.) (JPP)

86. NORTHERN VIRGINIA FISCAL STUDY

Main Investigator: Jerome P. Pickard.

Status of Research and Publications: Project work began in March, 1964. Completion and analysis of data are in process. Target date for completion of the Study is late 1964.

Agency: Urban Land Institute, under sponsorship of Northern Virginia Regional Planning and Economic Development Commission.

Previous Digest Report: None.

Research Problem. The Northern Virginia Region, a suburban zone adjoining Washington, D.C., has experienced explosive urban growth. This Study will analyze the fiscal trends associated with the growth of each major political unit in the region and will make some projections of regional needs, population, and fiscal resources to 1970, 1980, and 2000. The major emphasis of the Study will be on fiscal elements (revenues, expenditures, and debts); intergovernmental relations, especially revenue sharing; and relationships between urbanization and urban land use and the fiscal problems of Northern Virginia communities. (JPP)

87. HOMES ASSOCIATION STUDY

Main Investigators: Byron R. Hanke, William C. Loring, and Jan Krasnowiecki.

Status of Research and Publications: Manuscript completed. Publication as a Technical Bulletin planned for late Summer 1964.

Agency: Urban Land Institute, under sponsorship of Federal Housing Administration, National Association of Home Builders, Office of Civil Defense, Public Health Service--HEW, Urban Renewal Administration, and Veterans Administration.

Previous Digest Report: 10:1-76, 10:2-861 (GCT)

BRIEF MENTION

NEW URBAN AND REGIONAL RESEARCH AND TRAINING PROGRAMS AND CONFERENCES

Institute of Urban and Regional Development, University of California (Berkeley)

The Institute of Urban and Regional Development of the University of California at Berkeley presently consists of two Centers, the Center for Real Estate and Urban Economics and the Center for Planning and Development Research. A third Center dealing with urban social problems will be established next year. The Center for Real Estate was established a decade ago and the Center for Planning and Development Research in 1963.

Work now underway includes the development of an econometric model for the State of California, a model for the distribution of land uses for the Bay Area, a study of the problems of developing new communities in California, studies in urban aesthetics, the development of projection methods for transportation studies, studies of the housing market, and studies of the structure of the real estate industry and of factors affecting the housing market for minority groups.

The professional background of key personnel is, of course, related to faculty position. Among principal project directors we have four staff members whose backgrounds are in economics or finance, three in city planning, one in sociology, and one in law.

The Center for Planning and Development Research receives University support and at present has a grant from the Ford Foundation and a contract with the State of California Planning Department. The Center for Real Estate and Urban Economics receives State support in the amount of \$80,000 per year.

Director of the Institute is William L. C. Wheaton, of the Center for Real Estate and Urban Economics is Paul F. Wendt, and of the Center for Planning and Urban Development is John W. Dyckman. (DJL)

Human Ecology Program, University of Illinois

The University Committee on Human Ecology (University of Illinois) was established by the Provost in 1961. The parent body had been in existence since 1957 as an ad hoc Committee on Human Ecology between the Division of Social Sciences and the School of Life Sciences. At the present time there are 23 members. Eight Colleges (Agriculture, Commerce and Business Administration, Engineering, Fine and Applied Arts, Liberal Arts and Sciences, Medicine, Physical Education, and Veterinary Medicine), the School of Life Sciences, and the Center for Zoonoses Research have established close working relations with the University Committee. The members represent many disciplines and over the past seven years have

established an effective and productive program of education and research. The members of the Committee offer two advanced undergraduate courses and are engaged in several interdisciplinary research projects. The Committee has also responded to requests from the University Administration for guidance in planning international activities.

The two courses given by the members of the Committee are Introduction to Human Ecology and Problems in Human Ecology. "Introduction to Human Ecology" seeks to give advanced undergraduate and graduate students in biological and social sciences, including regional planning and other areas of application, a working knowledge of the principles, techniques and findings useful for the study of the relations between human populations and their environments. Because human ecology is a specialized aspect of the general adaptation of living organisms to their environment, the first part of the course undertakes a brief but intensive review of ecology as a whole. Beginning with an analysis of environments, it then surveys physiological requirements, life cycles and regulatory mechanisms in animals as a foundation for understanding biological communities. The second part of the course deals with the biological and cultural aspects of human adaptation. It stresses man's neuro-psychological specializations and their consequences. It reviews, type by type, the expansion of human productive capacities and of human societies, from hunting and gathering to modern industrial societies. Finally, the course focuses on problems of application: the ecology of health, and the use of ecological principles in regional planning.

"Problems in Human Ecology" is designed for advanced undergraduate and graduate students in the biological and social sciences, and for those working or intending to work in the areas of regional planning or foreign relations. It seeks to give these students information on the methodologies used to investigate problems in human ecology, on the effects of specific environmental and social factors, on the application of ecological principles in human cultures, and on the problems encountered in understanding and dealing with mankind in its various biocenoses. An important section of the course is a multidisciplinary discussion of human ecology in a single, selected region--in this case, East Africa. It is hoped that this course will give its students an insight into the problems which emerging nations must meet and solve, and an idea of the types of help and the limitations thereof that we in more technically developed nations can give them.

A third course dealing with field technique and actual field experience is currently under consideration.

Two training programs are closely allied to the work of this University Committee. One is the "CIC Biometeorology Graduate Program" supported by funds from the U.S. Public Health Service and the other is the "Interdepartmental Training Program for Science Information Specialists" supported by funds from the National Science Foundation.

Members of the Committee and their graduate students are working on two research projects. One concerns the Human Ecology of Cancer in Iceland and is supported by funds from the National Cancer Institute.

The other relates to the "Emergence and Recession of Zoonoses." This project is an activity of the Center for Zoonoses Research. CZR has established the Southern Illinois Zoonotic Observational Network with headquarters at Metropolis. A broad ecological study, with funds from the USPHS Communicable Disease Center, has been underway there for about one year. The main contributions of the University Committee have been in demography, regional geographical analysis, biometeorology, and animal ecology. (N.D. Levine, F. Sargent, II, and D.B. Shimkin.)

Area Development Center, Boston University

Boston University recently established the Area Development Center to organize a University-based attack on the problems of poverty, unemployment, urban blight, and regional economic development. The Center will focus on a broad range of faculty skills and specialized competence in basic development problems.

The professional staff and faculty associates of the Area Development Center will engage in research in the fields of economic growth, regional development, and unemployment. Local and area development organizations--both private and governmental--will be afforded diagnostic and remedial advisory services and planning guidance in undertaking programs for balanced economic development.

A long-range objective of the Area Development Center is to assist and strengthen regional and local economic leadership by direct guidance and by graduate-level training opportunities related to the basic Center program. Such an economic and urban extension service is consistent with the historical identification of Boston University with community and public service.

The core professional staff of the Area Development Center consists of: Dr. Francis S. Doody, Professor of Economics and Director, Bureau of Business Research, College of Business Administration, Director; and Dr. Melvin R. Levin, Research Professor of Administration in the College of Business Administration, Program Coordinator, (MRL)

Division of Research on Community Economic Problems, American Institute for Economic Research

The American Institute for Economic Research, at Great Barrington, Massachusetts, has created a Division of Research on Community Economic Problems for the purpose of developing solutions for the problems of economically "sick" communities. The Institute, which is directed by E.C. Harwood, intends to offer its services for the analysis of situations in communities that desire assistance for the solution of their economic problems.

Research to date indicates that many communities are economically "sick" because they deny themselves a competitive advantage by penalizing productive activity through the taxation of improvements while rewarding the relatively nonproductive through the under-assessment and under-taxation of site values, that is, by failing to collect from the beneficiaries the cost of community-created advantages.

Other aspects of community economic problems, including those pertaining to fire, casualty, and public liability insurance are to be studied. The results of research undertaken will be available on a cost basis to communities generally. (JTG)

Course in Comprehensive Planning Institute of Social Studies (The Hague)

The Institute of Social Studies in The Hague will offer a four-month course in comprehensive planning from September 1 to December 18. Purpose of the course is to bring together experienced planners from various disciplines and countries to broaden their view on planning. The course will be given in English and will consist of classes, seminars, case studies and excursions. Successful candidates will receive a Diploma in Comprehensive Planning. Applications, which should be submitted before June 1, can be obtained from the Institute of Social Studies, 27 Molenstraat, The Hague, Netherlands.

International Conference on Cross Cultural Similarities In the Urbanization Process

The following comments have been prepared for the Digest by Edward M. Bruner, Associate Professor of Anthropology at the University of Illinois, who will attend the conference described.

About 15 anthropologists, who have already conducted firsthand field research on urbanization in non-Western cities, will hold an international conference from August 27 through September 8, 1964, at the European Conference Center of the Wenner-Gren Foundation located at Burg Wartenstein, Austria. The Wenner-Gren Foundations for Anthropological Research is sponsoring the Conference.

Over the past ten years a number of anthropologists have become interested in the nature of urbanism and in the process of urbanization in the underdeveloped areas of the world. A series of interesting field studies have been undertaken but to our knowledge there has been very little coordination of these pioneer research efforts and even less communication among the scholars involved. Particularly detrimental has been the lack of communication between European and American researchers. Actually, the studies thus far completed seem to suggest a convergence of new and important theoretical considerations concerning an understanding of the urban process. Indeed, it is likely that some of the generalizations about urbanism developed by sociologists whose work was limited to the study of Western cities will have to be revised in the light of new data from Asia, Africa, Latin America, and Oceania.

The Conference will therefore have the following general objectives:

1) To bring together anthropologists from various countries who have done field work on problems of urbanism and urbanization, thereby providing an opportunity to exchange ideas, evaluate the work accomplished to date, and to chart future work.

2) to attempt a preliminary but systematic formulation of urban theory with emphasis on the social-cultural concomitants of city life, the prevalent forms of social organization in the city, and the relationship between the urban area and its hinterland. We should also like to take a closer look at what is meant by "urban," "cosmopolitan" and similar concepts, and we hope to develop ways of handling them that have cross-cultural validity.

The program will be divided into three sections. Part I, Introduction, August 28 and 29, will consist of a review of previous work and open discussion of urban theory and concepts. Part II, Discussion of Papers, August 30 and 31, September 1-4, will focus on the data papers which each participant has prepared on his area. In Part III, Conclusion, September 5, 6 and 7, we propose to summarize our results and discuss their implications for future research.

Western Resources Conference, University of Colorado

According to a recent University of Colorado bulletin, the 1964 Western Resources Conference will be held at the University of Colorado, Boulder, from July 14 through 17. The theme of the conference is to be "New Horizons for Resources Research--Issues and Methodology."

Topics for each day are as follows: Tuesday, July 14, The Expanding Frontier of Outdoor Recreation, Marion Clawson, chairman; Wednesday, July 15, Recent Research in Pollution of Water, Gordon E. McCollum, chairman; Thursday, July 16, Region vs. Nation: Cooperation or Conflict, Charles Leven, chairman; Friday, July 17, Oil Shale: 1964 or 1984, John M. Kelly, chairman.

Conference proceedings will be published and may be obtained from the University of Colorado Press. Further information concerning the conference may be obtained from the Bureau of Continuing Education, University of Colorado, Boulder, Colorado, 80304.

TRANSPORTATION

Guidelines for Transportation Planning, Bureau of Public Roads (a)

The Bureau of Public Roads has issued guidelines for the transportation planning process required as a prerequisite for approval, after July 1, 1965, of any program for federal-aid projects in any urban area of more than 50,000 population.

(a) From ASPO Newsletter, January, 1964.

Transportation planning as defined by the Bureau is "concerned with all facilities used for the movement of persons and goods, including terminal facilities and traffic control systems. The process is based on the collection, analysis, and interpretation of pertinent data concerning existing conditions and historical growth; the establishment of community goals and objectives; and the forecasting of future urban development and future travel demands. It includes not only the initial preparation and evaluation of a transportation plan through an appraisal of practicable alternatives, but also periodic review and modification to meet changing conditions. In addition, it includes the preparation and dissemination of pertinent information needed by official agencies in their consideration of planning proposals and improvement programs, and for the encouragement of public understanding and support; and, the preparation of recommendations concerning the scheduling and financing of highway improvements, coordination with other urban development programs, revision of ordinances and regulations, and additional legislation, if necessary."

Also required is the establishment of a formal procedure between the state highway departments and the governing bodies of the local communities for carrying out the transportation planning process "in a manner that will insure that the planning decisions are reflective of and responsive to both the programs of the state highway department and the needs and desires of the local communities."

The basic elements for which inventories and analyses are required are economic factors affecting development; population; land use; transportation facilities, including those for mass transportation; travel patterns; terminal and transfer facilities; traffic control features; zoning ordinances, subdivision regulations, building codes, etc.; financial resources; and social and community-value factors such as preservation of open space, parks and recreational facilities, historical sites and buildings, environmental amenities and aesthetics.

Details of the requirements for these ten basic elements are spelled out in the Bureau's Instructional Memorandum 50-2-63 (1), which has been issued to supplement the definitions and interpretations of Section 134 of the Federal-Aid Highway Act of 1962 given in the Bureau of Public Roads Instructional Memorandum 50-2-63, March, 1963.

Department of Legal Studies, Highway Research Board

A Department of Legal Studies has been established by the Highway Research Board as the latest step in widening the Board's activities to make possible a comprehensive approach to the problems

of modern highway transportation systems. Four committees will be activated by the Department to deal respectively with the special problems of condemnation and land use control, metropolitan-urban transportation law, traffic and motor vehicle law, and state highway codes. Chairman of the Department is J.H. Beuscher, Professor of Law at the University of Wisconsin.

METROPOLITAN AREAS

Census Data for Revised SMSA's (b)

The Bureau of the Census recently issued "Standard Metropolitan Statistical Areas in the United States as Defined October 18, 1963." This report presents data on the 216 standard metropolitan statistical areas (SMSA's) in the United States as revised by the October 18, 1963, release of the Bureau of the Budget (SR No. 310, Oct. '63, p. 127). The first table in this report presents the 1960 and 1950 population of the SMSA's and their component parts, with the four new areas identified by footnotes and additions to the areas as shown in the reports of the 1960 Census of Population indicated by asterisks. The second table gives the population inside and outside the central city or cities of the SMSA's. The final table ranks the SMSA's by their population in 1960.

Copies of this report, Series P-23, No. 10 (16 pages, 25 cents) may be purchased from the Bureau of the Census, Washington, D.C. 20233.

RESEARCH MATERIALS

Division of Regional Economics, U.S. Department of Commerce

The following information has been received from Robert E. Graham, jr., who has been named to head the newly established Division of Regional Economics, Office of Business Economics, United States Department of Commerce.

In addition to the regional income work, which we had been doing in the National Income Division, two other major programs are underway. The one, which is well on its way towards completion, is the product of Dr. Dunn and his associates, before the transfer of the latter group to the Office of Business Economics. It analyzes the basic factors underlying differential changes in employment by county and by detailed industry over the period 1940-60. This will be a powerful tool for regional economic analysis. The second project, which is just beginning, relates to the generation by the Office of Business Economics of a complete system of income and employment estimates for all local areas of the Nation.

(b) From Statistical Reporter.

The first five of a series of comprehensive manpower reports for 122 redevelopment areas have been issued by the United States Employment Service. The reports are intended to assist in developing plans for local economic recovery and include a description of the area, its economic and manpower characteristics, the nature of local unemployment, and a summary of recent labor market developments and outlook. The five areas for which reports have been prepared are Detroit, Michigan; Pittsburgh, Pennsylvania; Providence, Pawtucket, Rhode Island-Massachusetts; New Bedford, Massachusetts; and Huntington, Ashland, West Virginia-Kentucky-Ohio.

BIBLIOGRAPHIES

Boston Metropolitan Area Planning District

To assist the newly-created Boston Metropolitan Area Planning Council (Chapter 668, Acts of 1963), the Bureau of Public Affairs of Boston College has embarked on a program to provide a bibliography of studies already completed or in process in the planning district. It is expected that the report will be available in July, 1964. The Bureau has the active cooperation of the Harvard-M.I.T. Joint Center for Urban Studies. It is the intent of the Bureau to include in this compilation all important contributions since March, 1958, the date of the first publication of such a bibliography. In this publication, it is expected that studies done by or behalf of the cities and towns comprising the planning district will be listed by individual community. There will be a variety of maps, depicting the planning district in reference to other regional groupings. (RJMO'H)

Inventory of Economic Studies, Pacific Northwest

A 209 page report entitled Inventory of Economic Studies and Data Sources for the Pacific Northwest has been compiled by the Subcommittee on Economic Studies of the Columbia Basin Inter-Agency Committee. Covering current economic studies and sources of economic data of Federal, state, and local government agencies and private organizations, purpose of the inventory is to provide an exchange of information and promote coordination of research among public agencies and others conducting studies relating to the economic development of the region. The inventory is limited to studies completed within the past two years, currently in process, or definitely scheduled. It encompasses studies of the Pacific Northwest region or any part thereof which includes historical economic data, forecasts economic developments, or analyzes the economic feasibility of specific developments in the area.

Further information concerning the study can be obtained from Mrs. Roberta Remak, chairman of the Subcommittee, at the Department of Planning and Development, State Office Building, Portland, Oregon. (GC)

Urban Sociology (c)

Urban Sociology: A Bibliography. Robert Gutman. Urban Studies Center, Rutgers--The State University, New Brunswick, N.J. 1963. 44 pp. Paper, \$1.

The relevance of sociology to the policy problems of contemporary urban life was a basic criterion for selection in this bibliography of the major published works of urban sociology since 1945. The titles are arranged under nine major headings, which include "Space and Land Use in Urban Society," "The Culture of Urban Settlements," and "Sociology and Urban Planning." Important works from other disciplines supplement those from urban sociology to make a valuable record of titles for the planner who is aware of the far-reaching social consequences of decisions involving housing, transportation and spatial relationships. (KM)

Real Estate Research/News Brief

Real Estate Research/News Brief (v. 1, no. 1, 1964) is a joint quarterly publication of the Center for Real Estate and Urban Economics (Berkeley) and the Real Estate Research Program (Los Angeles) of the University of California. "Its plan is to communicate swiftly, intelligently, tersely, general and research information in the fields of real estate and urban land economics. By setting forth such news in a compact form, the Brief aims to serve a special audience--California's real estate industry and others concerned with the allocation of urban land resources."

Editorial Offices of the publication are at 208 Stephens Memorial Hall, University of California, Berkeley 4, California.

Expansion of Program, Special Classification Center, Special Libraries Association

With the receipt of a supporting grant from the National Science Foundation in the fall of 1963, the Special Libraries Association is undertaking to broaden the scope, increase the holdings, and extend the services of its loan collection of classification schemes and subject heading lists. As a first step in this expansion, every effort is to be made to develop a collection that is comprehensive and complete in all subject fields and in all aspects of subject analysis and classification. Holdings now number approximately 900 titles. Contributions to the collection of systems devised for their own particular situations by organizations and individuals are currently being sought. Further information can be obtained from Barbara Denison, Special Classification Center, Special Libraries Association, School of Library Science, Western Reserve University, Cleveland, Ohio, 44106. (SK)

(c) From ASPO Newsletter. April, 1964.

MISCELLANEOUS

Databank Brethren

A roster of persons working on databanks, or at least interested in the subject, together with information on types of projects on which they are working, where pertinent, is currently being maintained by Edward F.R. Hearle, of the Rand Corporation. Databanks are defined as systems for gathering, filing, and supplying information on a continuing (contra single survey) basis. The idea of multiple agencies both gathering and receiving the data is also implied, and, according to Mr. Hearle, the data most of the Brethren are interested in are handled mainly by state and local governments and used primarily for planning. For further information, Mr. Hearle can be contacted at the Rand Corporation, 1700 Main Street, Santa Monica, California, 90406. (SK)

Map of Population Distribution

Publication of a new map of the United States showing urban and rural population distribution based on the 1960 census was recently announced by the Bureau of the Census. The new map, printed in four colors and black, shows in solid red the areal extent of 213 urbanized areas, with their population size indicated by an orange disk. Rural population concentrations of less than 2,500 are shown by black symbols, land areas are in tan, and major water areas are in blue. Scale is 1:5,000,000, or approximately 79 miles to an inch. Sheet size is 30 by 42 inches.

Population Distribution, Urban and Rural, in the United States can be obtained for 50 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, or from any U.S. Department of Commerce field office.

Division of Research Development, Housing and Home Finance Agency

A Division of Research Development has been established in the Office of Program Policy of the Housing and Home Finance Agency. Purpose of the Division is to coordinate the Agency's research activities, administer research projects and encourage and promote the availability of research knowledge concerning housing and urban development. Director of the Division is George M. Belknap, formerly advisor on metropolitan and intergovernmental programs for the Urban Renewal Administration.

AVAILABLE BACK ISSUES OF RESEARCH DIGEST

A few copies of the back issues below are still available. Issues through Vol. 10, No. 1 may be purchased at \$1.00 per copy. Beginning with Vol. 10, No. 2 the price is \$2.00 to individuals and \$3.00 to organizations.

Vol. 3	No. 2	November, 1956
Vol. 5	No. 2	November, 1958
Vol. 8	No. 2	November, 1961
Vol. 9	No. 1	April, 1962
Vol. 9	No. 2	November, 1962
Vol. 10	No. 1	April, 1963
Vol. 10	No. 2	November, 1963

A few copies of the Index to Volume 8 and the Index to Volume 9 are also available, at \$1.00 each.

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Number 1

April, 1965

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Editorial Notes

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1964 NATIONAL SURVEY OF METROPOLITAN PLANNING

Main Investigator: Leopold Goldschmidt.

Status of Research and Publications: Report published March, 1965. (Available from U. S. Government Printing Office, Washington, D. C. 50 cents.)

Agency: American Society of Planning Officials for Housing and Home Finance Agency, Office of Metropolitan Development.

Previous Digest Report: None.

Research Problem. To determine scope and nature of metropolitan planning organization and activity. Of major concern was relationship of metropolitan planning agencies to transportation studies, particularly studies undertaken to meet 1962 Federal-Aid Highway Act requirements.

Previous Relevant Research. 1963 National Survey of Metropolitan Planning, ASPO. (See Research Digest, 11:1-32.)

Method of Study. A questionnaire, prepared by the Office of Metropolitan Development, HHFA, was sent to agencies in 150 Standard Metropolitan Statistical Areas which have some form of metropolitan planning activity underway.

Major Findings. Two-thirds of the 216 Standard Metropolitan Statistical Areas have some form of metropolitan planning activity underway. As reported by 129 agencies, a total of \$21 million was available for metropolitan planning in 1963, of which half was spent in areas with populations of one million or over. The Federal government and county governments were the major contributors, 32% of all revenue coming from each source. Almost all - 135 of 139 - of the responding agencies reported that comprehensive transportation planning programs were being pursued in the areas served by them; 125 agencies participated in these programs, and 86 reported the use of electronic data processing in transportation research. (JK)

EVALUATION OF PLANNING AND ZONING ADMINISTRATION IN A RAPIDLY GROWING CITY

Main Investigators: Dennis O'Harrow, Jerome Kaufman and Jack Noble.

Status of Research and Publications: Report published in 1964.

Agency: American Society of Planning Officials for the San Jose, California City Council.

Previous Digest Report: None.

Research Problem. Rapid, explosive city growth, not only reaps some rewards; it also creates some knotty problems. Since population, economy, land area and land use undergo sweeping changes in a short time period, these cities often find that their machinery for guiding development -- primarily planning and land use controls -- needs adjustment and overhaul. San Jose, California

is such a rapidly growing city. Its population has jumped from 100,000 to 330,000 in 14 years and it now spreads over a land area larger than that covered by half of the most populous cities in the country. ASPO was asked by the San Jose City Council to study its planning and zoning administration programs, determine their ability to cope with growth, and recommend improvements in their content, organization, and administration.

Previous Relevant Research. In recent years the Society has undertaken several similar planning and zoning administrative studies; examples are Pittsburgh, Tucson and Phoenix.

Method of Study. Analysis of reports and records, field study, and interviews with key local officials and citizens.

Major Findings. In rapidly growing cities, decisions that lead to land development are made by a great many people in both the private and public sectors. Thus, coordinated action is difficult to achieve. Because these decisions are responsive to market pressures, they are often made quickly. A great volume of land development petitions places an extraordinary burden on the planning agency, cutting deeply into the time it can devote to other duties. And rapid growth tends to concentrate attention on problems of expansion, while built-up, in-lying parts of the city receive less attention.

The report offers many recommendations for research, plan-making, coordination, zoning and subdivision control administration, external and internal planning agency organization, and financing to bring about a more effective local response to problems of rapid growth. (JK)

3. APARTMENTS IN THE SUBURBS

Main Investigator: Frank So.

Status of Research and Publications: Report published June, 1964. (Available only to subscribers to ASPO Planning Advisory Service.)

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. Apartment building construction in recent years has captured an increasing portion of total housing starts, especially in the suburbs. High land costs and changing family composition are producing even more pressure for apartments in suburbs as well as in central cities. The report covers two aspects of the problem: analyses to determine the effects of apartment developments (particularly cost-revenue studies), and ways to handle the planning and zoning problems created by apartment building in the suburbs.

Major Findings. The main research tool used to determine net cost to the city of providing services to new apartment buildings is the cost-revenue study. These studies, however, fall short in several respects. Most cost-

revenue studies claim that apartments reduce nonschool municipal costs, but none attempts to prove this. Estimates of potential revenue are usually calculated on a per-acre basis instead of on a per dwelling unit basis. Indirect and nonmonetary costs are rarely included in the analysis.

Literature is scattered on location principles, density and site planning standards, and zoning ordinance provisions relating to apartments. The report consolidates much of this material. In particular, it discusses the FHA new minimum property standards and their applicability to suburban apartment developments. (JK)

AIR RIGHTS

Main Investigator: Leopold Goldschmidt.

Status of Research and Publications: Report published May, 1964. (Available only to subscribers to ASPO Planning Advisory Service.)

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. Interest in air rights developments has increased considerably, particularly in central areas where land values are highest and ground space is at a premium. The report reviews past and proposed projects, discusses problems that planning agencies must face in dealing with such projects, and summarizes action by governmental bodies to regulate air rights developments.

Previous Relevant Research. Bernard, Michael M., Airspace in Urban Development -- Emerging Concepts, Urban Land Institute Technical Bulletin No. 46, July, 1963.

Major Findings. Air rights developments are expensive and therefore limited to a few sites. Railroad yards in central areas are most commonly used as surfaces for air rights developments, although highways and open parking areas are also used. A few cities -- New York and Chicago -- have amended their zoning ordinances to encourage planned air rights developments. Most, however, make no special provision. Imaginative proposals are competing for public attention, and although the record of achievement is still limited to certain choice sites, it seems likely that the future will witness expansion in the use of air space. (JK)

MUNICIPAL DEVELOPMENT DEPARTMENTS

Main Investigator: Francis E. Moravitz.

Status of Research and Publications: Report published August, 1964. (Available only to subscribers to ASPO Planning Advisory Service.)

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. To survey and document the experience of a new municipal organizational form, Departments of Community Development, which combine development-oriented operations (primarily urban renewal) with traditional planning agency functions.

Previous Relevant Research. Several articles have been published on these new departments, including "Organization for Urban Development" by Richard Massell in Public Management, March, 1963 and "Administrative Organization for Planning" by George Duggar in Planning 1962, ASPO Conference Proceedings.

Major Findings. Departments of Community Development must still be considered experimental. Although the combining of functions raises almost as many problems as it solves, this reorganization pattern justifies itself by facilitating the accomplishment of action programs. Findings of a survey of seven new agencies indicate that advance planning time is reduced, short-term operations time is increased, but coordination of other departmental planning is still weak. (JK)

6. PLANNING FOR HISTORIC PRESERVATION

Main Investigators: Robert L. Montague and Tony P. Wrenn.

Status of Research and Publications: Report published November, 1964. (\$2.50; \$1.50 to members of ASPO and the National Trust for Historic Preservation)

Agency: American Society of Planning Officials and the National Trust for Historic Preservation.

Previous Digest Report: None.

Research Problem. To review current court decisions and legislative action involving historical preservation in the states; to assess real estate and tax advantages of preservation; and to suggest a program for historical area preservation.

Method of Study. Archives of National Trust for Historic Preservation and material collected in a year-long study in 1963 by Kentucky Attorney General's office provided basic source materials.

Major Findings. Forty-two of the reporting states in the study have some form of historic preservation program operating on the state level. The power of eminent domain for acquiring historic sites is bestowed on 20 states.

The public interest in preservation is clear. Measures are available to afford encouragement and protection, among them scenic easements, tax exemption zoning, and historic district ordinances. (JK)

INDUSTRIAL REDEVELOPMENT

Main Investigator: Leopold A. Goldschmidt.

Status of Research and Publications: In process. Scheduled for publication in July, 1965.

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. To determine feasibility of industrial redevelopment in central urban areas, conditions of success, possible alternate solutions, and cost. The study sees industrial substandardness both as a problem of inefficient or undesirable land use and as a socio-economic problem, affecting private and public resources. Special emphasis is given the two-pronged Chicago effort to assess over-all quality of the city's industrial plant and to alleviate immediate problems of individual industrial enterprises. Past studies of industrial blight and industrial obsolescence are reviewed. (LG)

AUTO GRAVEYARDS

Main Investigator: Frank Beal.

Status of Research and Publications: In process.

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. The number of automobiles disposed of each year has increased steadily so that it now represents a major concern for many communities. This study will describe and analyze the techniques available for controlling the maintenance, operation, and location of junk yards, auto wrecking yards, and scrap processing yards. It will describe the operational needs and locational requirements of these land uses, and analyze the control techniques of zoning and licensing. (FB)

CONTROLLING PLANNED RESIDENTIAL DEVELOPMENTS

Main Investigator: Daniel R. Mandelker.

Status of Research and Publications: In process.

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. Zoning and subdivision control regulations are being amended to provide flexibility made necessary by changes in scale and

techniques of residential development. This study will examine the background of these changes, analyze legal considerations that must be taken into account in enactment of planned development ordinances, and consider problems that arise in their drafting and administration. (JN)

10. PLANNING FOR TRUCK TERMINALS

Main Investigator: Thomas J. Davies.

Status of Research and Publications: In process.

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. With the steady expansion of the trucking industry, an increasing number of cities face problems of planning and regulating the location and construction of truck terminal facilities. This study will seek to identify criteria for planning truck terminal facilities in the city and metropolitan area. (JK)

11. WATER IN RELATION TO SOCIAL AND ECONOMIC GROWTH IN AN ARID ENVIRONMENT

Main Investigators: M. M. Kelso, W. E. Martin, and R. A. Young.

Status of Research and Publications: Research to be completed 1966. Publication of bulletin reporting results is expected in late 1967.

Agency: University of Arizona, Department of Agricultural Economics, under sponsorship of Rockefeller Foundation.

Previous Digest Report: None.

Research Problem. The supply of water is expected to be the ultimate limiting factor in the development of the Arizona economy. Present consumption of water for irrigation, household and industrial uses is estimated to be seven million acre feet per year, of which approximately four and one-half million are pumped from groundwater stores. Only about one-third of this pumped water is replaced by natural recharge of the underground stores, resulting in an estimated overdraft exceeding three million acre feet per year. A consequence of this continuing overdraft is that the water table in central Arizona is falling at an estimated average of six feet per year. The increasing depth leads to increasing costs of recovering groundwater, both from the necessity of periodically deepening wells and changing pumping equipment, and the higher unit pumping expenses.

Over ninety per cent of the consumption of water in Arizona is for the irrigation of agricultural crops. Hence, the primary impact of declining water tables will be felt in the irrigated crop sector of the state's economy. It is expected that changes in farm organization, output level, size of operation and

resource demands will result as water costs increase. Changes in output and resource demand will have further impacts throughout the rest of the economy, particularly in those sectors processing agricultural commodities and supplying inputs to the agricultural sectors.

The objectives of this study is (1) to predict the impacts of declining water table on the organization, output and resource use in the irrigated crop sector in Arizona; and (2) to predict the impacts of changes in agricultural production and resource demand on other sectors of the state's economy.

Method of Study. 1) Mathematical programming models designed to predict effects of increasing costs of water on output, organization and resource demand of typical farm situations in the irrigated agriculture sector are being developed. Typical farm situations were developed on the basis of an intensive field survey of principal irrigated farming areas in the state in 1964. The possibility of linking the programming models with analog computer models of the hydrological systems is under consideration. 2) An interindustry model of the Arizona economy is being developed which comprises 26 endogenous sectors (including ten agricultural production, five agricultural processing, seven manufacturing and mining and three service sectors) and seven exogenous sectors (including households, state and local government, federal government, construction, and net imports). 3) The effects on the growth and development of any sector of the state's economy of changing water conditions over time can then be predicted by "plugging in" the predictions of the programming models into the interindustry model. (RAY)

THE MIDDLE-INCOME NEGRO FAMILY FACES URBAN RENEWAL

Main Investigators: Lewis G. Watts, Howard E. Freeman, Helen M. Hughes, Robert Morris, and Thomas F. Pettigrew.

Status of Research and Publications: Published March, 1965, by Massachusetts Department of Commerce and Development, 120 Tremont Street, Boston, Massachusetts.

Agency: Brandeis University, Research Center of Florence Heller Graduate School for Advanced Studies in Social Welfare, under sponsorship of Action for Boston Community Development, Incorporated; United Community Services; Massachusetts State Housing Board; Massachusetts Department of Commerce and Development; and Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. To describe residential mobility of middle-income Negro families in "Washington Park" urban renewal rehabilitation area (in Roxbury) and to trace acceptance of Negro families who chose to move out of area to other parts of Greater Boston.

Hypotheses. That, confronted with urban renewal, Roxbury's Negroes with economic means to do so would rush to embrace any opportunity to escape from the relatively segregated and declining neighborhood.

Method of Study. Two structured interviews (the first in the spring of 1962, the second ten months later) with wives in these families, information on their places of residence then and sixteen months after first interview, and lengthy, informal interviews with wives and husbands in selected families among them. Sample consisted of 250 families with incomes of at least \$5,000 most of whom have children. All interviewing was undertaken by Negroes trained in social work.

Major Findings. Despite availability of housing elsewhere in and around Boston, especially housing for sale, a surprisingly small proportion of families (about 17 per cent) studied moved at all, and of these, less than four per cent chose to live among white families in predominantly white communities. Factors influencing decision to remain in or near study area include low housing cost, accessibility, confidence in improvement of area, and fear of prejudicial treatment elsewhere. Since Negro resistance in principle to discrimination is not necessarily followed by effort to integrate, implication is that cause of integration in housing may best be served by private and public organizations actively encouraging movement of white families into communities such as Washington Park, while striving to bring Negroes freer access to housing. (WWS and SK)

13. NATURAL RESOURCES IN LATIN AMERICA

Main Investigator: Joseph Grunwald.

Status of Research and Publications: Termination date, June, 1965. Publication in book form expected in late 1965 or early 1966.

Agency: The Brookings Institution, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. A study of natural resources in Latin America, "resources" being defined as the agricultural sector, together with fishing and forestry, and the minerals-extraction sector, including metals and mineral fuels. Separate chapters are devoted to petroleum, coal, the seven major metals (iron, manganese, copper, aluminum, lead, zinc and tin), and the principal agricultural products (coffee, cocoa, sugar, bananas, livestock, cereals, fruits and vegetables); and for each product the resources, production, consumption, foreign trade and prospects are discussed. Particular attention is given to: 1) the adequacy of the region's resource base for domestic requirements, and its importance relative to world resources. 2) the influence of the resource sector on the structure and development of the regional economy in the past and the significance of this influence for future development. 3) the contribution of natural resources to the economy, directly as a source of food and industrial raw materials, and indirectly as a source of foreign exchange. 4) the region's position as a supplier of primary products, relative to total world demand for such products, and changes in that position. 5) the relative importance, in explaining difficulties or stagnation in the resource sector, of:

a) reduction in demand, or in the rate of growth of demand, from developed consumers or raw materials; b) the loss of markets to competing producers of raw materials, with lower costs; c) inflexibilities of supply, inherent in the particular commodities or caused by other features of the regional economy, which prevent the full exploitation of cost advantages; and d) imperfections in world markets for primary products. (JG)

BAY AREA SIMULATION STUDY

Main Investigators: Paul F. Wendt, William Goldner, Ronald S. Graybeal, Roland Artle and Allen Pred.

Status of Research and Publications: In process. Descriptive paper "Bay Area Simulation Study: A Pilot Model of Santa Clara County with Some Applications" presented at January 29-30, 1965 meeting of Western Regional Science Association.

Agency: University of California (Berkeley), Center for Research in Real Estate and Urban Economics, under sponsorship of Association of Bay Area Governments and Housing and Home Finance Agency.

Previous Digest Report: 10:1-6.

Research Problem. Forecasting patterns of employment, population, and land use by census tracts in nine county San Francisco Bay area through use of simulation methods. (HOB)

GEOGRAPHICAL LOCATION OF WHOLESALING

Main Investigator: James E. Vance, Jr.

Status of Research and Publications: Study completed. Findings to be incorporated in a paperback to be published by Prentice-Hall in near future.

Agency: University of California (Berkeley), Center for Research in Real Estate and Urban Economics and Department of Geography.

Previous Digest Report: 10:1-7.

Research Problem. Location and physical form of wholesale trade establishments in San Francisco in 1908, 1929, and 1962. Geographic patterns for wholesaling activity in nation as a whole. Development of location theory for wholesaling. (HOB)

AIR RESOURCE MANAGEMENT IN THE SAN FRANCISCO BAY AREA

Main Investigator: John A. Maga.

Status of Research and Publications: Published, 1965.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. Maintenance of satisfactory air quality in San Francisco Bay Area. (BJH)

17. CALIFORNIA PUBLIC FINANCES

Main Investigator: Orville Poland.

Status of Research and Publications: In process. Basic statistical series have been chosen and data collected and in some cases graphed.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. Systematic analysis of trends in government spending, revenue and debt at state and local government levels in California. As data are developed individual problem areas will be selected for more intense study. Basic determinants of change in California's public finances will be identified so that some predictions--or at least projections--may be made. (BJH)

18. CITY PLANNING IN THE UNITED STATES

Main Investigator: Mel Scott.

Status of Research and Publications: In process. Publication expected spring, 1967.

Agency: University of California (Berkeley), Institute of Governmental Studies; Department of City and Regional Planning; Center for Planning and Development Research and American Institute of Planners.

Previous Digest Report: None.

Research Problem. A comprehensive history of city planning in United States since 1900. It will include plans as well as planning, attempt to identify origins of master plans, regional planning and early awareness of connection between concepts of regional planning and regional government. Development of the idea of federal concern with local planning will be traced. Since history is being written for celebration commemorating fiftieth anniversary of founding of American Institute of Planners, influence of professional planner will be stressed throughout. (BJH)

9. GOVERNMENT OF THE SAN FRANCISCO BAY AREA

Main Investigator: Victor Jones.

Status of Research and Publications: Preliminary mimeographed draft available.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. Examination of system of intergovernmental relations which is gradually developing in San Francisco Bay Area to meet some of the needs for governmental services and controls over a territory larger than that of individual cities and counties. The Association of Bay Area Governments was organized in February, 1961. Its development in the initial three years of its existence presents for the first time the prospect of a locally based, general purpose, adequately staffed metropolitan agency. There is convincing evidence that ABAG can become a forum for metropolitan discussion and debate, a local coordinator of the cooperative efforts of municipalities and counties, an instrument for metropolitan planning, a means for the joint execution of metropolitan decisions, and an effective partner in the urban programs of state and federal governments.

The development of ABAG into this kind of regional government is not inevitable, however. It can be hastened, retarded, or even prevented by forces within the organization, and by the behavior of powerful groups outside local government. This paper attempts to identify some of these forces and behaviors. (BJH)

10. MAYORS' CONFERENCES IN THE BAY AREA: THEIR ORIGIN AND FUNCTIONS

Main Investigator: Donald W. Koepp.

Status of Research and Publications: In process. Reading copy is being circulated.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. Examination of Mayors' conferences, i.e., voluntary associations of elected and some appointed officials of all incorporated cities in a given county.

Method of Study. Basic data drawn from interviews and analysis of minutes of meetings. (BJH)

11. OPEN SPACE AND THE LAW

Main Investigators: Frances W. Herring, Franklin C. Latham, Roger W. Findley, Harold E. Rogers, Jr., E. Stanley Weissburg and I. Michael Heyman.

Status of Research and Publications: Ready to go to press.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. Report covers police power regulation of open space--how far use of property may be lawfully limited without compensation; alternatives when police power is unavailable--condemnation, purchase of fee or less-than-fee interest, gift, or dedication; influence of taxation and assessment policies on land use, open space retention, and gifts of land; ways of financing park and open space projects; appropriateness of specific legal tools to specific purposes, and some newer legal and administrative devices now in use or being tested in California or elsewhere. All contributors are lawyers and study approaches problems from legal viewpoint. (BJH)

22. IMPACT OF PROPERTY TAXATION ON AGED HOME OWNERS

Main Investigator: Margaret Greenfield.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies and School of Social Welfare.

Previous Digest Report: None.

Research Problem. Characteristics of population 65 and over. Extent to which families or individual householders own their own homes and income of such families or individuals. Effects on this group of increases in property tax.

Method of Study. For a selected group of elderly home owners in one city annual income and expenditures will be examined and estimates made of property tax impact. Possibilities of tax forgiveness at various levels of income will be examined and ways in which other state or local governments are handling problem will be surveyed. Supplementary interviews with a sample of 120 aged home owners in another city will be conducted as a group research project by graduate students in School of Social Welfare. (BJH)

23. RACE AND POLITICS IN BERKELEY

Main Investigator: Thomas W. Casstevens.

Status of Research and Publications: Study completed to manuscript stage.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. In 1963 there was a hard fought campaign in the city of Berkeley on a fair housing ordinance which had been passed by the City Council and was brought to a vote of the people by referendum. This study is an analysis of the genesis, culmination and consequences of the referendum. (BJH)

4. POLITICAL PARTIES AND MUNICIPAL POLITICS

Main Investigator: Thomas W. Casstevens.

Status of Research and Publications: In process. Eventual publication in Lane Series of monographs on San Francisco Bay Area.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. An analysis of degree of, and socio-economic correlates of, de facto partisanship in legally nonpartisan municipal politics of a sample of cities in San Francisco Bay Area. (BJH)

5. PLANNING IN MAJOR METROPOLITAN AREAS

Main Investigators: Stanley Scott and others.

Status of Research and Publications: In process.

Agency: University of California (Berkeley), Institute of Governmental Studies.

Previous Digest Report: None.

Research Problem. Series of monographs, each concerned with a different area and written by a different author. Reports will present comparative regional planning and urban growth in selected major metropolitan regions in United States and other countries. Central aim will be to shed some light on factors shaping urban form under various environments: physical, economic, political, etc. Each author will discuss social and economic aspects of urban growth and development, in addition to physical elements. Institutions and politics that help to determine directions of urban growth will be considered with some care. Each author will examine relationship of governmental system and of economic organization to his area's regional plans, and their formulation and implementation, as well as to processes of "unplanned" urban growth and development. In addition to treatment of government and politics in individual metropolitan area monographs, one or more separate comparative papers will deal explicitly with relationship of politics, governmental authority and decision-making to processes of urban change. Object of

series, aside from specific information gained about areas covered, will be to discover what lessons from other experiences are relevant to planning and development of San Francisco Bay Area.

Areas selected and authors designated are as follows: Montreal, Frank Smallwood, Dartmouth; New York, Michael Danielson, Princeton University; Tokyo, Nathan Glazer and Ikumi Hoshino, University of California, Berkeley; Philadelphia, Cyril Roseman, San Francisco State College and William Wheaton, University of California, Berkeley; San Francisco, Stanley Scott, University of California, Berkeley; Los Angeles, Winston W. Crouch, University of California, Los Angeles; Rome, Milan and Turin, V. B. Zimmerman, State University of New York, Albany, and Alessandro Taradel, Ministry of Public Works, Rome; Toronto, Albert Rose, University of Toronto; London, Donald Foley, University of California, Berkeley; Dade County, Florida and San Juan, Puerto Rico--Victor Jones, University of California, Berkeley; Rotterdam (Rhine Mouth area), Arne F. Leemans, Institute of Social Studies, The Hague and Professor Steigenga, University of Amsterdam; Paris, Peter Wengert, Paris, France; Yugoslavia, with special reference to Zagreb, Jack Fisher, Cornell University; Bogota, Columbia; Santiago, Chile; and Sao Paulo, Brazil, Francis Violich, University of California, Berkeley. (BJH)

26. SPILLOVER OF PUBLIC EDUCATION COSTS AND BENEFITS

Main Investigators: Werner Z. Hirsch, Elbert W. Segelhorst, and Morton J. Marcus.

Status of Research and Publications: Completed and published, August, 1964.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs.

Previous Digest Report: 9:1-66.

Research Problem. The costs of educating the children in a certain school district are not all borne by the residents of that district; neither do the benefits remain confined to that district alone. To what extent do the costs and benefits of primary and secondary public education spill over jurisdictional boundaries, and how far may the financing decisions of one community affect people in other areas?

Method of Study. Integration of spatial tax incidence and cost-benefit analysis. The spatial dimensions of the distribution of education's costs and benefits are illustrated in detail by a case study of a suburban school district, Clayton, Missouri, which is used to articulate the problems of data and methodology. Major cost and benefit elements of public education spillover are identified along with the key mechanisms of population migration and fiscal interdependence. The spillover of operating and capital costs through public revenues is traced through the local property tax and the state sales, excise and income taxes. Imputed costs of municipal services, foregone student earnings and miscellaneous costs to students and their parents are examined. The investigation examines the incremental

student income through a multi-variate analysis and also provides empirical estimates of the benefits to co-workers and the benefits to working mothers. A general framework for the interpretation of both costs and benefit spill-overs is developed with special attention given to the implications of spill-overs for local decision-making. The study also examines some of the local, state and federal government policy implications.

Major Findings. A combination of cost burden and benefit findings reveals that the study area generated net social benefits of \$933,000 in the school year 1959-1960. However, because cost spillouts greatly exceeded benefit spillouts, Clayton realized net benefits of \$1.2 million from its own education. Costs spillins from education provided in other districts overshadowed the favorable benefit spillin to leave Clayton with a net cost burden of education provided in all areas of \$1.5 million. The case study indicates that spillovers are of major magnitude for the individual school district, but existing patterns of economic interaction and fiscal interdependence, aided by the progressive features of the federal income tax, are precluding inequitable consequences. (MJM)

7. DESIGN OF A REGIONAL INFORMATION SYSTEM

Main Investigators: Werner Z. Hirsch, Sidney Soneublum, Marvin Hoffenburg and James Jamieson.

Status of Research and Publications: Phase 1 (specifying and organizing relevant information) nearly complete. Phase 2 (designing system to store and retrieve information) in initial stages. Eventual publication in monograph form by agency.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. Modern methods of information handling (particularly the use of data processing equipment) are effecting a major revolution in socio-economic research and policy-making. An ever-increasing number of government organizations are introducing automated information systems and are gathering immense quantities of detailed information, storing it in automated form, and then processing it mechanically to aid both administrative operations and policy decisions.

The striking advances in the capacity to gather, store, process, and retrieve information, however, should not be viewed as a technological substitute for one of the most basic needs, i.e., specifying the information capable of elucidating the significant issues which face society. In other words, a "data bank illusion" can easily be created which suggests--because we can mechanically handle large volumes of data--that we do not require criteria to define the relevance of the information nor to define how it should be acquired, stored, and processed for use in specific decision areas.

The purpose of this project is to improve the level or quality and efficiency of the use of information in decisions affecting state and local areas.

Method of Study. Research has proceeded in two major phases: The first phase has concentrated on identifying the most powerful information capable of improving specific types of decisions, specifying the relevance of this information, providing a framework for organization of the data which will assist analyses, and developing a model of regional growth for making long-term economic and demographic projections. The study thus far has concentrated on information applicable to the following decision areas: education, housing, transportation, water resources, outdoor recreation, and economic growth.

The second phase of the study (recently entered) deals with the actual problems in establishing and operating the data bank itself. It is anticipated that research in this phase will focus on determining the general classes of users of the system, developing an efficient system to store and retrieve the data specified in the first phase of research, and organizing an administrative system for effective and economical operation (serving customers) on a continuing basis. (JBJ)

28. PARK-BOND VOTING IN MUNICIPAL ELECTIONS

Main Investigator: James B. Jamieson.

Status of Research and Publications: Completed and published, 1965. (Part of doctoral dissertation, Brown University, Political Science.)

Agency: University of California (Los Angeles), Institute of Government and Public Affairs.

Previous Digest Report: 11:1-15.

Research Problem. Socio-economic variables associated with successful park-bond elections in California.

Hypotheses. (1) Individuals who use neighborhood parks (or have family members who do) tend to favor public expenditures to provide these types of recreation resources; (2) individuals who carry the greatest burden of payment for public recreation resources expenditures tend to be against such proposals. This tends to be even more true if these individuals or their families are nonusers of neighborhood park facilities; (3) certain nonutilitarian factors (aesthetic values and/or sense of social responsibility) play a role in shaping some individuals' attitudes toward parks.

Methodology. Interviews with a random sample 186 registered voters in three California communities. A multivariate analysis was used to obtain the results.

Major Findings. Of ten variables, five--sex, residence status, family status, political affiliation, and education--were found to be closely

associated with park-bond attitudes. Each of these factors has an independent effect on park-bond voting behavior when the others are held constant. Females tend to favor park-bonds more than males, renters more than home owners, individuals with young children more than individuals without, Democrats more than Republicans, and people with a high education level more than those with a low level. (JBJ)

29. MENTAL ILLNESS AND URBAN LIFE (1)

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs, Urban Observatory.

Previous Digest Report: None.

Research Problem. Effect of important variables in the urban environment on the development of patterns of mental illness among ethnic groups of low socio-economic status, and on those families which are socially and spatially mobile. Changes which take place in family relationships with the development of mental illness. Tertiary costs of mental illness to these families.

Method of Study. Selection and interview of a sample of Los Angeles families under auspices of UCLA's Survey Research Center. Emphasis on interdisciplinary, longitudinal approach. It is anticipated that the sample of families will be studied over a period of four years or more in order to determine interrelationships and dynamics of family living, and effects of various forces of urban change on family life. (MJM)

30. FAMILY DISORGANIZATION AND VALUES IN THE URBAN ENVIRONMENT

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs, Urban Observatory.

Previous Digest Report: None.

(1) Further comments on the Urban Observatory, under which this and the two following projects are to be conducted, will be found on page 109.

Research Problem. An intensive examination of family stability and instability and values of various ethnic and socio-economic groups. Cumulative effect of factors associated with the disorganization of families and the relationship of these factors to mental health and illness.

Method of Study. Same as above. (MJM)

31. SELECTED FACTORS ASSOCIATED WITH POVERTY

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Institute of Government and Public Affairs, Urban Observatory.

Previous Digest Report: None.

Research Problem. Intergenerational aspects of poverty. Relationship between poverty and aging. Patterns of living among the poor.

Method of Study. Same as above. (MJM)

32. PERCEPTION OF DROUGHT HAZARD ON THE GREAT PLAINS

Main Investigator: Thomas Frederick Saarinen.

Status of Research and Publications: In process.

Agency: University of Chicago, Department of Geography, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. More and more stress is being placed upon technology as the solution to resource needs. But there are major gaps in our knowledge as to how technology is diffused in society and how technical advances interact with other aspects of human life. It is not known why some innovations spread rapidly and widely while others are slow in finding acceptance. Nor is it known what conditions foster or block technological change.

As one small aspect of this problem, I propose to conduct a study into the ways in which resource managers in the Great Plains perceive the recurring drought hazard. I will investigate how this affects their perception of the range of alternatives open to them and hence, to some degree, their final decision as to farming practices followed.

Previous Relevant Research. (1) Flood plain work at University of Chicago Department of Geography and recent work on perception of natural resources. (2) Rural diffusion research. (3) Great Plains literature. (4) Drought climatology. (5) TAT test and personality theory.

Hypotheses. (1) Perception of the drought hazard will play a large role in decisions as to which practices are adopted. (2) Perception of the drought hazard will vary according to (a) aridity of the area (b) amount and frequency of drought experience (c) satland-yonland differences (d) personality differences.

Method of Study. Six areas chosen in the Central Great Plains winter wheat belt ranging from the most humid to most arid margins. A random sample of farmers in each area was interviewed and given a projective test. (TFS)

33. AREAWIDE LOCAL GOVERNMENT IN THE STATE OF ALASKA

Main Investigator: Ronald C. Cease.

Status of Research and Publications: Completed and submitted as doctoral dissertation, August, 1964.

Agency: Claremont Graduate School, Institute of Urban and Regional Studies.

Previous Digest Report: None.

Research Problem. Establishment and organization of areawide local government in Alaska. The Constitution provides that all local governments shall be vested in cities and boroughs, organized or unorganized. The organized borough is a form of areawide local government covering a natural community. The unorganized borough is not a functioning unit of government.

To accomplish the constitutional requirement that boroughs be established, the Legislature enacted the first Borough Act in 1961. The Act declared the entire State outside organized boroughs as a single unorganized borough. Special districts were required to be integrated into city or borough government by July 1, 1963. Organized boroughs may be incorporated under the Act by local option petition and election, but only if they meet certain standards relating to population, geography, economy and transportation. Two state constitutional organs located in the Governor's office, the Local Affairs Agency and the Local Boundary Commission, have the duty of determining whether proposed boroughs meet the required standards.

The Borough Act provided for first and second class organized boroughs which are distinguished by the non-areawide functions which they may perform. Both classes may provide education, planning and zoning, and tax assessment and collection on an areawide basis. Both classes may acquire supplemental functions through petition and election and through transfer by the city of city functions.

The organized borough is governed by an assembly, composed of representatives appointed by and from first class city councils and of representatives elected by the voters outside first class cities. The Borough Act provides for a strong chief executive. The voters may choose between either an elected borough chairman or an appointed manager.

When the legislature convened in 1963, only one organized borough had been incorporated. Consequently, the legislature enacted the Mandatory Borough Act, which provided that certain areas of the State must be incorporated as organized boroughs on January 1, 1964. Under the impetus of this Act, four borough elections were successful in September, 1963, and four additional boroughs were incorporated under the provisions of this Act on January 1, 1964.

Major Findings. The Mandatory Borough Act has been one of the most controversial statutes ever passed by the Alaska Legislature. It has been bitterly criticized through the state and numerous efforts have been made to repeal it. In August, 1964, the State Supreme Court, in effect, ratified the Mandatory Borough Act and this seems to guarantee the continuation of borough governments.

Borough governments have experienced a number of transitional problems. Some of these, such as the conflict between borough and city, admit of no easy solution. Despite its problems, the organized borough is an active unit of local government. Several boroughs have already proposed the acquisition of additional borough functions. With all its difficulties, borough government in Alaska offers an opportunity for democratic and efficient areawide local government unparalleled in the United States. (GSB)

34. THE SEARCH FOR POWER IN CALIFORNIA REAL ESTATE

Main Investigator: Albert C. Johns.

Status of Research and Publications: Completed and submitted as doctoral dissertation, August, 1964.

Agency: Claremont Graduate School, Institute of Urban and Regional Studies.

Previous Digest Report: None.

Research Problem. To locate and identify principal areas of power in California real estate. Some emphasis is placed upon activities of the California Division of Real Estate, the Real Estate Commissioner, and members of the Real Estate Commission.

Purposes of the study are fivefold: (1) to explore and locate, to the extent possible, where power exists within those areas of the economy making up the real estate industry and the governmental agencies which regulate them; (2) to examine relations among the many elements earning their livelihoods and profits from the real estate business and allied fields of endeavor; (3) to examine relations between and among the agencies, particularly at state and local levels, regulating the various elements engaged in the real estate business; (4) to examine the relations between and among the regulated and the regulators; and (5) to propose a reorganization of the California Real Estate Commission granting it policy-making rather than advisory status.

Major Findings. Power in California real estate is fragmented. At the level of state governmental regulatory agencies, large amounts of power are found within the offices of the Corporation Commissioner and the Commissioner of Savings and Loan, often surpassing that of the Real Estate Division. The Governor of California and the State Legislature, as would be expected, also have large amounts of power over real estate and its allied industries. Local government, both city and county, each also has power, which is fragmented among different divisions and sections.

Power in the private economy is held by many persons. This may be based upon ownership of land, possession of money in large amounts, or the ability to provide a financial statement of substance. Expertise in real estate development, assembling of land, and merchandising a real estate product are all elements possessing power. Business associations, such as the California Real Estate Association, Home Builders Association, Savings and Loan League of California, and others, also exercise power in different ways.

In addition to a proposal to reorganize the California Real Estate Commission, a recommendation is also advanced to change the composition of the Commission. At present it is constituted only of real estate brokers, but it should be broadened to include home builders and laymen. Other recommendations include abolition of the present requirement that the Real Estate Commissioner be a licensed broker and the proposal that members of the Commission have their licenses made inactive during the tenure of their appointment.

Overlapping functions of government at local levels indicated that governmental confusion often placed unnecessary hardship upon portions of the private economy. A recommendation was made for responsibility to be placed within a given job classification so that processing of the work load of certain governmental units could be expedited. (GSB)

35. BOSTON AND NEW YORK CITY SOCIAL INFLUENCE ON THE PEOPLE OF THEIR COMMON HINTERLAND

Main Investigator: David E. Buerle.

Status of Research and Publications: In process; doctoral dissertation.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Research Problem. To measure the relative extent of Boston and New York City influences on people living in the area between them, and to identify and attempt to explain some of the reasons for variations in the spatial distribution of these influences.

Previous Relevant Research. Many studies have been made which have attempted to delimit hinterland boundaries around metropolitan centers. A study by Howard L. Green, completed in 1952, is the most relevant. He

attempted to delimit hinterland boundaries of New York City and Boston in Southern New England based on the following criteria: transportation, communications, agriculture, recreation, finance, and manufacturing.

Method of Study. Field interviews were used, based on questions designed to investigate possible associations between interviewees and the two cities. To assure equal areal coverage, interview points were determined on the basis of a systematically aligned sample. (REM)

36. A COMPARATIVE STUDY OF SOME AMERICAN AND ENGLISH CENTRAL BUSINESS DISTRICTS

Main Investigator: Paul J. Mika.

Status of Research and Publications: Submitted as doctoral dissertation.
Will be available from University Microfilms, Inc.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Research Problem and Method. Selected aspects of three English CBDs (Norwich, Dervy, and Southampton) are investigated and the findings compared with the results of studies conducted several years ago by Murphy and Vance in nine American cities. Attempts are made to explain similarities and differences found between the CBDs of the two countries in relation to regionally variably factors that might be expected to affect CBD character. Comparison is made as rigorously as possible by delimiting the English CBDs according to the land use measurement technique developed by Murphy and Vance. No serious difficulty is experienced in applying the technique in the English cities. There are no significant differences in kinds of land uses that are not accounted for by the land use classification, and the technique apparently approximates the extent of the CBD with equal success in both countries.

Major Findings. Irregular structural qualities of the English CBDs are traced to the unorganized cadastral frameworks of early urban development which took place in the sites currently occupied by the CBDs. Despite distortions, the shapes of the CBDs fit the theoretical approximations proposed by Murphy and Vance for the American CBD and roughly ordered street patterns reflect the early economic functions of the English cities. Relatively small sizes of the English CBDs are attributed to a combination of at least three factors: (1) the legacy of a pre-industrial scale of urban development that was restricted by a low level of transport technology and limited economic and architectural engineering capabilities; (2) comparatively high population density which limits the per capita amount of space for most urban uses; (3) the relatively small amounts of CBD space devoted to parking, hotels, and some kinds of office uses as compared with the American CBDs. The interiors of many English CBD blocks are given over to traditionally assumed non-CBD uses that place little value on street frontage. This in part accounts for the slightly higher proportion of space devoted to non-CBD uses in the English CBDs than in the American ones.

As in the American CBDs, areally differential growth has resulted in a gradual movement of the English CBDs through time. Also, as its city grows, each of the English CBDs tends to shift increasingly from the center of the generally built-up area but to remain at a point of minimum aggregate travel as governed by the city's developing transport network. Though there is evidence of greater specialization among retail establishments in the English CBDs, the kinds of retail uses and total percentage amounts of space occupied by them are similar to those of the American CBDs. The gross vertical and horizontal arrangements of land uses are similar within the CBDs of the two countries. (REM)

37. THE EFFECTS OF ZONING DECISIONS ON THE DEVELOPMENT OF PATTERNS OF URBAN LAND USES

Main Investigator: Salvatore J. Natoli.

Status of Research and Publications: Research in process.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Research Problem. To ascertain the extent to which zoning decisions act as significant factors in the development of certain patterns of urban land uses.

Previous Relevant Research. Previous works have approached the problem from theoretical points of view and have made specific studies of non-conforming uses; others have attempted to minimize or to protest the value of zoning decisions in setting certain patterns of urban land uses.

Method of Study. Zoning decisions act as effective land use controls (notwithstanding the fact that they act at different levels and at different scales) because zoning commissions do not always approve all requests for amendments and variances. This study will attempt to trace the development of certain functional areas of Worcester, Massachusetts, in an historical period comparable in length to that of their development during a 38-year period of zoning. Models will be constructed to show minimal patterns of development within the constraints of the ordinance as opposed to the zoning model and to the actual patterns of development. The findings should hopefully prove that there are areal variations in the effects of zoning decisions upon various functional areas in the city, and that these patterns have relevant associations to particular areal functions. The historical and model approaches should also provide a working methodology for other studies of this nature. (REM)

38. AN ANALYSIS OF THE DISRUPTIVE EFFECTS OF SNOWFALL IN SELECTED URBAN AREAS

Main Investigator: John F. Rooney, Jr.

Status of Research and Publications: Doctoral dissertation, near completion. Will be available from University Microfilms, Inc., and probably in article form.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: None.

Research Problem. The major purpose of this study is to assess the general negative impact of snowfall in urban areas. Disruptive effects are analyzed with an emphasis on identification of critical environmental variables. Man's adjustments and attitudes regarding the snow hazard are probed in an effort to ascertain their role in minimizing or maximizing disruption. The research is pursued in several medium and small sized cities characterized by annual snowfalls ranging from 25 to 70 inches.

Previous Relevant Research. From a geographic standpoint, knowledge concerning the snow hazard is extremely limited. The most pertinent allied research is being conducted under the auspices of the American Public Works Association and is concerned with the economics of snow control in urban areas. Other related work includes the flood-hazard and disaster studies, and much of the research which has employed decision-making theory.

Hypotheses. It is believed that there is a significant positive relationship between mean annual snowfall and disruption which may be altered by other physical environmental factors such as wind, water content, and temperature. It is further hypothesized that most snow-caused difficulty is attributable to the curtailment of transportation facilities. It is believed that disruption can be substantially reduced both through public and through private adjustment, and may be increased or decreased by man's attitude toward the snow hazard. Finally, it appears that cities are far from realistic in their attitudes toward the potential disruptive impact of snow.

Method of Study. Information was obtained chiefly from daily newspapers and public records. Disruption was analyzed over a ten-year period, and each snow day was categorized according to the severity of its negative impact upon human activity. Interviews were utilized to procure data concerning man's attitudes toward the snow hazard and to assess public and private (including commercial) adjustments.

Major Findings. Inconvenience rather than great disruption accompanies most snowfalls. However, on the occasions when severe disruption does result, the impact on the communities is often grave. Most curtailment is traceable to impeded traffic flow. Retail shopping patterns are often disarranged, with outlying centers profiting at the expense of the Central Business District. A relationship between annual accumulation of snow and the amount of disruption failed to materialize.

The attitudes which people hold toward the snow hazard undoubtedly accentuate the difficulties which they encounter. City programs often prove to be ineffective largely due to a lack of funds, coordination, and planning. The need for improved public snow control is very evident. The ultimate solution to the urban snow problem will demand additional expenditures, better planning, improved public relations, and coordination among local governmental agencies. (REM)

39. DENVER METROPOLITAN AREA OCCUPATIONAL PROJECTIONS

Main Investigator: William E. Roberts.

Status of Research and Publications: In process. Expected completion date: October, 1965.

Agency: University of Colorado, Bureau of Economic Research, under sponsorship of U. S. Department of Labor, Office of Manpower, Automation and Training.

Previous Digest Report: None.

Research Problem. To project selected occupations in Denver SMSA to 1970 and 1975. Focus will be methodological; an effort will be made to develop techniques based upon accepted statistical methods and judgment which can be used in other SMSA's. (WER)

40. SURVEY OF SPECIALIZED SOCIAL SCIENCE INFORMATION SERVICES IN THE UNITED STATES

Main Investigators: Paul F. Lazarsfeld, and Jack Ferguson.

Status of Research and Publications: A directory of social science information services has been written and a research report prepared. One short descriptive journal article has been published, "Social Science Information Service: Progress Report of a Survey," American Behavioral Scientist, June, 1964 (Vol. 7, No. 10).

Agency: Columbia University, Bureau of Applied Social Research, under sponsorship of National Science Foundation.

Previous Digest Report: None.

Research Problem. A survey of social science information services.

Method of Study. Approximately 4300 potential information sources were polled by mailed questionnaire; 700 indicated that they met the criteria for inclusion in the survey. These criteria were that the organization have or produce information of potential interest to social scientists; that the organization be at least occasionally accessible; and that the collection of the organization go beyond that of a library either in its comprehensiveness, its large amount of unpublished materials, or its output being a uniquely

transformed product. Both private and public agencies responded, as did agencies of state and federal government. Research organizations, museums, welfare services, statistical units, and specialized libraries are some of the very diverse respondents. (JF)

41. THE SUCCESSFUL URBAN SLUM CHILD: A PSYCHOLOGICAL STUDY OF PERSONALITY AND ACADEMIC SUCCESS IN DEPRIVED CHILDREN

Main Investigators: Bernard Mackler, Thelma P. Catalano, and W. Dana Holman.

Status of Research and Publications: In process.

Agency: Columbia University, Teachers College, Institute of Urban Studies, under sponsorship of United States Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. This study compares relatively successful elementary school pupils from low-income households in depressed neighborhoods of the urban north with relatively average and failing pupils from identical settings. The aim is to document different patterns of personal and social development and to relate these patterns to scholastic performance among disadvantaged children. The emphasis is on differences in the personal and interpersonal situations that mold the highly motivated in contrast to the average, and the failing student.

The study illuminates the interplay of psychological, familial, environmental (emphatically the school), sociological (primarily peer and neighborhood), and economic factors in the education of children from economically deprived families. It attempts to evaluate academic motivation from the pupil's viewpoint, that is how he sees and desires to do well academically, and to relate acquired motivation to interpersonal relations. (BM)

42. EDUCATIONAL COMPLEX STUDY PROJECT

Main Investigators: Robert A. Dentler, Herbert J. Gans, Bernard Mackler, Richard P. Boardman, Mary Ellen Warshauer, and Therese M. Barmack.

Status of Research and Publications: Completed. Available on request from New York City Board of Education, 110 Livingston Street, Brooklyn, New York.

Agency: Columbia University, Teachers College, Institute of Urban Studies, under sponsorship of New York City Board of Education.

Previous Digest Report: None.

Research Problem. To conduct a detailed examination and analysis of the concept of the Educational Complex, as the idea applies to public schools in New York City, to provide a basis for decisions by the Board of Education and its administration concerning Educational Complexes. The concept of the Educational Complex was advanced by the New York State Education Commissioner's Advisory Committee on Human Relations and Community Tensions in its report entitled Desegregating the Public Schools of New York City. The committee viewed the Educational Complex as one approach among several possible approaches aimed at reducing and/or preventing school segregation.

Method of Study. In detailing and determining the feasibility of the idea of the Educational Complex, the Institute of Urban Studies visited schools, considered travel time between schools, analyzed present total grade by grade ethnic composition of schools as well as the rate of change of ethnic composition in the schools and the surrounding communities, related possible combinations of schools to data on the school building program and capacity and utilization figures of existing schools.

Major Findings. The series of memoranda released to the Board of Education dealt with the organization, administration, and curriculum of Complexes, method of their introduction, actual devising of some possible Complexes in Queens and Brooklyn, the role of "600" schools in the organization of Complexes, and technical papers on the school building program, the logistics of busing in Complexes, Puerto Rican residential patterns and changes, and a basis for classifying ethnic composition of schools. (RAD)

43. EDUCATIONAL BARRIERS TO ECONOMIC SECURITY IN LARGE CITIES

Main Investigators: Robert A. Dentler, and Mary Ellen Warshauer.

Status of Research and Publications: In process. Publication expected by Teachers College Bureau of Publications in summer or fall of 1965.

Agency: Columbia University, Teachers College, Institute of Urban Studies, under sponsorship of Social Security Administration, and United States Department of Health, Education, and Welfare.

Previous Digest Report: None.

Research Problem. To identify extent, distribution, and social and economic correlates of premature withdrawal from high school and adult functional illiteracy as educational barriers to economic security in 131 of the largest cities in the United States.

Hypotheses. Major organizing and working hypothesis, that differences in levels of high school withdrawal and of adult functional illiteracy in large cities are functions of differences in urban community population, composition, size, and change, and of differences in occupational structure, personal income, and employment conditions. Minor working hypothesis, that departures of cities from levels of school withdrawal and adult illiteracy as predicted from the best multiple regression

equations obtaining in testing our major hypothesis, are functions of differences in municipal expenditures for health, education, and welfare services.

Method of Study. Multiple correlation regression analysis for both white and non-white population. (RAD)

44. DEVELOPING METROPOLITAN TRANSPORTATION POLICIES: A GUIDE FOR LOCAL LEADERSHIP

Main Investigators: John A. Perkins and others.

Status of Research and Publications: Published April, 1965. Committee for Economic Development, 711 Fifth Avenue, New York, New York 10002. \$1.00.

Agency: Committee for Economic Development.

Previous Digest Report: None.

Research Problem. Transportation decisions which will affect metropolitan areas for generations are being made with little participation by leaders in the areas affected. The problem was to suggest guidelines to help metropolitan areas understand their current transportation problems and participate in wise planning for the future.

Method of Study. Three year study by a subcommittee headed by Dr. John A. Perkins, President, University of Delaware. The policy statement opens with a technical description of the "basic long-term factors" that affect all transportation systems: population growth, transportation technology, the interests of travelers, property owners and the general public, the pattern of land use, and changes anticipated or desired by the community. It discusses motor vehicle registration, street and highways systems and common carrier transportation. These components of a metropolitan transportation system are discussed in relation to the general growth and development of the community they serve.

Major Findings. The report presents a set of principles which should be applied by governments in making decisions on transportation. (1) The entire metropolitan area should be the basis for transportation planning. (2) Major land-use plans and major transportation policies should be developed together in ways which take account of the community's longer-range goals. (3) Transportation planning for a metropolitan area should consider all modes presently in use for transportation of people or goods within the area, and any additional modes which deserve serious study. (4) It is government's responsibility to anticipate private demand for, and the public interest in, all modes of transportation in a metropolitan area over a reasonable period of time. Plans for solving an area's transportation problems must be based on a thorough-going comparison of total costs of and total benefits from proposed programs. In finances and user charges, CED uncovers imbalances in present practice, and

makes the following recommendations toward their correction: (1) Most local governments support various forms of transportation with general funds. That support should be an equal amount per trip, whether by private automobile or common carrier, with the difference in cost absorbed by the traveler choosing the more expensive mode. (2) States should consider returning to municipalities a larger share of gasoline taxes collected locally. (3) Government agencies, in determining common carrier fare levels, should consider total benefits and costs of service and the appropriateness of local governments sharing some costs. Other CED suggestions on the relationship between local, county and state levels of government follow: (1) If a metropolitan area establishes an adequate planning body for transportation, it would be advisable for it to have a substantial voice, if not final authority, in the location and construction of inter-city and inter-state highways within the area. (2) Where transportation planning and provision for mass transportation are handled effectively at the metropolitan level, the state should transfer regulation of common carrier transportation to the metropolitan level served. (WWS)

45. COMMUNITY ECONOMIC DEVELOPMENT EFFORTS: FIVE CASE STUDIES

Main Investigators: W. Paul Brann, Virgil C. Crisafulli, Donald R. Gilmore, Halsey R. Jones, Jr., Jacob J. Kaufman, Jerome W. Milliman, John H. Nixon and William G. Pinnell.

Status of Research and Publications: Published January, 1965, as Supplementary Paper No. 18, Area Development Committee, Committee for Economic Development, 711 Fifth Avenue, New York, New York 10002. \$2.75.

Previous Digest Report: 11:1-24. (DRG)

46. POPULATION TRENDS IN CONNECTICUT

Main Investigators: Edward G. Stockwell and others.

Status of Research and Publications: In process. Publications since January 1, 1964: E. G. Stockwell, The Population of Connecticut: Town and County Fact Book, 1960, AES Bulletin 380 (January, 1964); E. G. Stockwell, The Population of Connecticut: Residential Mobility, 1955-1960, AES Bulletin 384 (June, 1964); E. G. Stockwell and G. A. Shea, Socioeconomic Index Scores for Connecticut Towns, 1960, AES Research Report No. 1 (December, 1964); and E. G. Stockwell, The Population of Connecticut: School Enrollment and Educational Attainment, 1960, AES Bulletin 385 (February, 1965).

Agency: University of Connecticut, Storrs Agricultural Experiment Station.

Previous Digest Report: None.

Research Problem. (1) To describe the growth and major shifts in distribution and structure of the population of Connecticut; (2) to analyze

the interrelationships of population trends in Connecticut with reference to selected social and economic phenomena and to selected public services; (3) to indicate the major determinants and consequences of present and projected population trends in Connecticut.

Method of Study. Using census material, vital statistics, and other social, economic, and demographic data, analyses will be made of the population trends and changes taking place in Connecticut. Emphasis will be placed on trends and differentials in labor force participation and employment status, occupational structure of the labor force, and the changing industrial basis of employment. A socio-economic ranking of towns and other small statistical units based on the income, occupation, and educational composition of the population will be constructed and will serve as the basis for measuring the association between population movements and socioeconomic phenomena. Analyses will be made of the components of population change, with particular emphasis being placed on the role of migration and mobility in the growth and redistribution of the population of Connecticut. (EGS)

47. SOCIAL AND ECONOMIC CONSEQUENCES OF CHANGES IN EMPLOYMENT UPON SELECTED COMMUNITIES IN THE NORTHEAST

Main Investigators: Edward G. Stockwell and others.

Status of Research and Publications: In process. Duration July 1, 1964 - June 30, 1968. (Contributing project to Northeast Regional Research, NE-47.) One publication issued: E. G. Stockwell, A Socioeconomic Ranking of Counties in Connecticut and the Northeast Region, AES Research Report No. 2 (January, 1965).

Agency: University of Connecticut, Storrs Agricultural Experiment Station.

Previous Digest Report: None.

Research Problem. Many of the States in the Northeast Land Grant College Region are currently engaged in case studies of community responses to various types of social and economic change. The purpose of the present project is to develop, at the regional level, a set of economic, social, and demographic data against which these case studies can be analyzed and interpreted.

Method of Study. Utilizing previous research findings, census materials, and other sources of socioeconomic and demographic data, analyses will be made of the interrelationships between population change and socioeconomic changes in the Northeast in order to provide a general regional background against which the findings of the related studies of individual communities may be viewed. Particular emphasis will be placed on analyses of educational composition, trends in labor force participation and employment status, occupational structure of the labor force, and the changing industrial basis of employment. A socio-economic ranking of counties based on the income, occupation, and educational composition of the population will be constructed, and will serve as the basis for measuring the association between population and socioeconomic phenomena. (E

48. HIKERS: A POTENTIAL MARKET FOR NEW ENGLAND FORESTS

Main Investigators: Walter C. McKain and others.

Status of Research and Publications: Pending. Expected duration July 1, 1965 - June 30, 1969. (Contributing project to Northeast Regional Research, NEM-35.)

Agency: University of Connecticut, Storrs Agricultural Experiment Station.

Previous Digest Report: None.

Research Problem. To review and inventory past and current research on forest recreation with special emphasis on hiking; to develop a classification of consumers with special reference to organized groups of hikers; to analyze the socioeconomic characteristics of the participants in one or more organized groups; to formulate and test hypotheses regarding motivation of hikers; and to apply the findings to the potential market in the Northeast.

Method of Study. The project will consist of three phases: (a) By means of library research and correspondence an inventory of research and a classification of consumers will be developed. (b) Information regarding current consumers will be obtained by means of mailed questionnaires to the members of hiking clubs and by personal interviews with their officers. Log books on specified trails will be examined and the entries analyzed. (c) Hypotheses regarding the motivation of the participants will be set forth and tested by means of interviews in depth using such standardized measures as are applicable. (EGS)

49. AGING IN RURAL CONNECTICUT

Main Investigators: Walter C. McKain and others.

Status of Research and Publications: In process.

Agency: University of Connecticut, Storrs Agricultural Experiment Station, under sponsorship of National Institutes of Health.

Previous Digest Report: None.

Research Problem. To analyze trends in number and characteristics of older persons in Connecticut; to identify problems of the aged with regard to health, income, housing, family relations, and recreation; and to relate these problems to possible solutions.

Method of Study. The first study will be "The marriage of older persons in Connecticut" using a cross sectional experimental design consisting of 100 elderly couples who were married in 1960-61. A structured schedule will be used by trained interviewers to obtain the socio-economic background of the couples, a life satisfaction index, a measure of physical health, measures of social participation, family relations and employment with reference

to both role expectations and role achievements, and history of the family and community reactions to the marriage. The data will be coded and transferred to cards for machine tabulations and analysis. A pretest of the schedule is planned and consultants will be hired to advise the investigator. Health information will be separately coded and analyzed by a physician. The adjustments made by older couples in health, income maintenance, family relations, and social participation will be related to their characteristics, the attitudes of children and friends to the marriage and other conditions surrounding the marriage. (EGS)

50. FINANCING THE HARTFORD (CONNECTICUT) METROPOLITAN DISTRICT: WITH SPECIAL REFERENCE TO THE EXTENSION OF SANITARY SEWERS

Main Investigators: G. Ross Stephens and William N. Kinnard, Jr.

Status of Research and Publications: Completed and published as a monograph, August, 1964. (Copies available at \$2.50 from the Institute of Urban Research, University of Connecticut, Storrs, Connecticut 06268.)

Agency: University of Connecticut, Institute of Urban Research, under sponsorship of Metropolitan District Commission Study Committee.

Previous Digest Report: None.

Research Problem. To investigate present practices of Metropolitan District in the assessment and financing of sanitary sewers and compare these with methods applied by other urban areas; to evaluate impact of sanitary sewers on residential property values; to develop and evaluate techniques for measuring the benefits to residential properties.

Previous Relevant Research. While no previous research on this specific topic has been undertaken at the University of Connecticut, the principal investigators have been engaged in studies into the impact of public takings on real property values for some five years. The research has resulted in case studies for classroom use, rather than any formal publications. In addition, Dr. Kinnard published in 1963 a Syllabus and Manual for the "Appraising Apartments" course sponsored by the Society of Real Estate Appraisers, Chicago, Illinois. Finally, the report itself contains a seven-page bibliography which includes several references to similarly oriented studies in the past.

Hypotheses. (1) The cost of sewer installations does not equal the benefits received by adjoining or abutting residential property owners, nor does cost of installation represent an appropriate measure of benefits. (2) Benefits may be measured through comparative analysis of sales of properties before and after sewer installation, provided appropriate deflation of series and control of extraneous factors is provided. (3) The benefit theory does not represent the most appropriate approach to logical financing of sanitary sewers, nor does it provide the best theoretical foundation for developing a pattern of assessments.

Method of Study. Two large subdivisions in two communities near Hartford were analyzed in detail with respect to the impact of sanitary sewer installations on their market or sales values. The financing procedures of the Hartford Metropolitan District Commission were analyzed in detail over a ten year period. Alternative methods and approaches practiced both in other parts of Connecticut and in other areas of the United States were studied in detail. Based upon the findings, a series of recommendations for action and change was provided.

Major Findings. (1) Sewer assessments based upon total cost of installation for each new subdivision served represent a cost levy significantly higher than benefits experienced. (2) Physical units of assessment, such as the front foot, are inappropriate even within the framework of the benefit theory. (3) Low density zoning in peripheral areas tends to accentuate the problem through the increase of cost of installation per dwelling unit served. (4) Payment based upon usage appears to be more in keeping with a benefit theory than does assessment in terms of physical units. (5) Evidence is overwhelming that the public interest is best served when local regulations require installation of public sanitary sewers at the time a subdivision is created. There is further fragmentary evidence that under these conditions the cost of installation is a reasonable approximation of the benefit actually experienced by the individual residences. This latter point requires further testing, however. (WNK)

51. IMPACT OF ELECTRIC TOWER LINE RIGHTS OF WAY ON AFFECTED RESIDENTIAL PROPERTIES

Main Investigators: William N. Kinnard, Jr. and G. Ross Stephens.

Status of Research and Publications: In process. Completed extensive bibliography. Publication expected late spring 1965.

Agency: University of Connecticut, Institute of Urban Research, under sponsorship of two Connecticut utilities.

Previous Digest Report: None.

Research Problem. To discover what effect, if any, acquisition of rights of way for electric transmission tower lines has on the value of residential properties traversed or abutted by such tower line rights of way. If an effect is found, its nature and extent will be measured.

Hypotheses. The acquisition of rights of way for electric transmission tower lines has a negative effect on values of residential property adjoining and adjacent to the right of way, essentially proportionate to the proximity of the right of way.

Method of Study. Mail questionnaires and interviews will cover groups and individuals believed to be concerned with the effects of electric transmission rights of way, to be followed by detailed analysis of opinions and records of property sales. Groups included in the survey are: individual property owners, lenders, tax assessors, builders, realtors, appraisers.

Emphasis is placed on residential subdivisions developed around or next to tower line rights of way, so that a volume of market sales may be developed for purposes of comparability. In addition, a basis for non-impacted control sales data is thereby provided. (EFF)

52. CONFERENCE ON RESEARCH PROBLEMS IN URBAN RENEWAL: PAPERS AND PROCEEDINGS

Main Investigators: William N. Kinnard, Jr., G. Ross Stephens, and others.

Status of Research and Publications: Completed and published May, 1964.
Available from Institute of Urban Research, University of Connecticut, Storrs, Connecticut 06268 at \$2.50 per copy.

Agency: Jointly sponsored by Connecticut Urban Renewal Association; Institute of Public Service, University of Connecticut; Institute of Urban Research, University of Connecticut.

Previous Digest Report: None.

Research Problem. Papers and proceedings resulting from a conference held at the University of Connecticut, Storrs, Connecticut, April 10 and 11, 1964. Three major topics were discussed: Local Organization for Development Programs, Organization for Effective Citizen Participation, Problems of Business Relocation. (EFF)

53. REGIONAL ANALYSIS FOR ECONOMIC DEVELOPMENT: A DEMONSTRATION STUDY OF SCHOHARIE COUNTY, NEW YORK

Main Investigators: Barclay G. Jones, Richard L. Ragatz, Phaichitr Uathavikul.

Status of Research and Publications: Published September, 1964. 143 pp. mimeographed.

Agency: Cornell University, Center for Housing and Environmental Studies, under sponsorship of New York State Cooperative Extension Service and the Board of Supervisors of Schoharie County.

Previous Digest Report: None.

Research Problem. To devise appropriate methods of approaching problems of declining areas. Many studies of declining areas have satisfied themselves with attempting to apply methods used for rapidly growing areas. Declining areas present different analytical, planning and action problems and therefore require different techniques for analysis.

Method of Study. Use of decision making framework, with emphasis on regional opportunity losses; i.e., the kinds of losses that are suffered by having chosen a particular action when another action would have been preferable. (WWS)

54. NATIONAL RESOURCE PLANNING AND DEVELOPMENT IN THE USSR

Main Investigator: Jack C. Fisher.

Status of Research and Publications: In process.

Agency: Cornell University, Department of City and Regional Planning,
under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. A pilot project, leading into more comprehensive coverage of natural resource planning in USSR. Immediate emphasis on Soviet construction industry, particularly management and administration. Regional agencies at the Republic and the Economic-Administrative Regional level will be examined in regard to impact program and policies within their jurisdictional area. (JGF)

55. LOCAL ADMINISTRATION AND PLANNING IN YUGOSLAVIA

Main Investigator: Jack C. Fisher.

Status of Research and Publications: In manuscript. Publication expected 1965 under title Regional Variation and Political Response: A Case Study of Socialist Yugoslavia by Chandler Publishing Company, 124 Spear Street, San Francisco.

Agency: Cornell University, Department of City and Regional Planning, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. To examine effects of uniform system of local administration which was superimposed over Yugoslavia's heterogeneous cultural and economic matrix after World War II. An investigation of differences and similarities among cities and communes of Yugoslavia was conducted to obtain quantitative expression of existing regional variation. This analysis and the approach utilized (factor analysis) provide insights into Yugoslavia's unique historical evolution and the functioning of its contemporary administrative system. A further objective of the book was to present a statistical and cartographical source of information on Yugoslavia, not readily available in English language sources.

Major Findings. (1) Analysis of city-size distributions indicates that northern cities have a rank-size distribution while those of south have a primate-type distribution. There would seem to be some justification in terms of city-size distribution alone in choosing to regard north and south of Yugoslavia as structurally different areas. (2) Selected indicators of economic development show a marked contrast between northern and southern portions of country coincidental to a line separating regions of Western influence -- Central European and Mediterranean -- from region of Byzantine-Turkish influence.

(3) Classification of Yugoslav cities by means of factor analysis, utilizing 1961 occupational and demographic variables, produced a regionalization of the country into traditional north-south dichotomy which corresponds to regions of traditional foreign domination. That is, despite economic development and increased urbanization, the cities have preserved their relative positions. (4) "Housing quality," a composite variable and an assumed index of modernization and economic development, follows general north-south dichotomy. The institutional administration of housing funds as well as the city planning mechanism itself varies from place to place in response to socio-economic differences. (5) The postwar evolution of Yugoslavia might be characterized as a process in which the formal center of decision-making for a variety of activities, at first located at a single federal level, gradually shifted to a diffusion of points which actively involved the greater mass of the population. The establishment of workers' self-management and the evolution of the communal system were the decisive instruments of the process. The "centralist-directive" phase of the early postwar period gradually gave way to increased regional or republican autonomy, which eventually incorporated 581 administratively independent communes, each, in theory, capable of charting its own future development within general limits set down by federal policy. There was an attempt to induce the individual factories and communes to move toward greater independence, thereby involving greater numbers of the population in the decision-making process. Politically, this had the effect of restraining the so-called "nationality problem" and more or less justified the precarious existence side-by-side of developed and underdeveloped areas. Yet the total impact of communal "independence" has only recently been felt and economically it has raised very serious problems. (JGF)

56. CITY AND REGIONAL PLANNING IN POLAND

Main Investigator: Jack C. Fisher.

Status of Research and Publications: Completed. To be published 1965 by Cornell University Press.

Agency: Cornell University, Center for Housing and Environmental Studies, Division of Urban Studies, Committee for Comparative Planning, under sponsorship of Center for International Studies.

Previous Digest Report: None.

Research Problem. The purpose of the project is to provide detailed analysis of the practice and operation of city and regional planning within a number of countries. The Polish volume is the first of a series.

The monograph is divided into three major sets of articles dealing with city planning, regional planning and economic planning. Each article was written by one of Poland's leading specialists for the particular field.

Part One, dealing with city planning, covers history of urban development and planning; urban planning theory - methods and results; development of the general plan of Warsaw; main urban planning problems in the Silesian-Krakow

industrial region; city planning in the Gdansk-Gdynia conurbation; postwar housing development in Poland; sociological implications of urban planning; and a view of architectural theory. A translation of the Polish Spatial Planning Act of 1961 is also included together with material on town planning standards.

Part Two, dealing with regional planning, covers post-war changes in economic and social structure of Poland; regional planning in Poland - theory, methods and results; regional planning in the Upper Silesian Industrial District; regional planning in the Krakow Voivodship; regional planning in the Bialystock Voivodship; water economy in Poland; rural planning in Poland; and research activity of the Committee for Space Economy and Regional Planning.

Part Three, dealing with national economic planning, covers comments on economic planning in Poland; location policy and the regional efficiency of investments; the long-term plan for Polish expansion, 1961-1980; and the role of science in the development of socialist society; with special regard to economic science. (JGF)

57. PLANNING AND BUDGETING IN MUNICIPAL MANAGEMENT

Main Investigator: Joseph M. Heikoff.

Status of Research and Publications: Published, April, 1965.

Agency: University of Illinois, Bureau of Community Planning, under sponsorship of International City Managers' Association.

Previous Digest Report: 10:2-17.

Major Findings. At the request of the sponsoring organization the empirical phase of the study was deferred. The report is primarily an educational monograph. It is based upon recent literature describing planning and budgeting concepts, and it surveys municipal experience in integrating these municipal management tools.

The report notes the responsibilities of municipal government for community social, economic, and physical development. It then examines three approaches to budgeting. The accounting approach is most concerned with controlling expenditures; economic analysis attempts to develop economic criteria for allocating resources among competing activities; the policy approach takes into account the political forces operating in the community in making priority and resource allocation decisions.

Contributions of professional managers and technical personnel to planning and budgeting come from the entire executive organization. Functional plans for services and facilities are prepared in the operating units. Coordination of facilities location with expected future land use is contributed by the land use planning organization. Central management has responsibility for coordinating program proposals of operating and land use planning units. These are incorporated into operating budget,

capital budget, taxation, and borrowing proposals to the legislative body. Executive proposals are based upon technical assessment of overall community development needs and the political factors operating in the community. (JMH)

58. STATEWIDE ECONOMIC STUDY FOR ILLINOIS

Main Investigators: Robert Farber, Neil Ford, Eleanor Gilpatrick, David Luck, Ruth Birdzell, Kalman Goldberg, Jeffery Green, and Hugh Nourse.

Status of Research and Publications: In process. County income estimates for 1963 should be available by the spring of this year, the state social accounts by region by the end of the summer, and results from the other projects should be forthcoming in the year ended August, 1966. Publication will be partly by monographs for the Bureau of Economic and Business Research and partly in the form of articles and news releases.

Agency: University of Illinois, Bureau of Economic and Business Research, under sponsorship of Illinois Board of Economic Development and U. S. Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. Economic analysis underlying preparation of long range economic plan for Illinois.

Method of Study. Projects are currently underway in the following major areas. (1) Data compilation and time series projection, by regions, in county income, production, services and commodity shipments. (2) Frameworks for analysis, including state social accounts, by region; statewide long-range econometric forecasting model; and from-to tables, by region. (3) Repercussions studies, including economic effects of migration; recreation potentials; the electronics industry; technology and unemployment; and labor force participation trends and outlook. (RF)

59. IMPROVING BUS PATRONAGE IN MEDIUM-SIZE CITIES

Main Investigator: Michael A. S. Blurton.

Status of Research and Publications: In process. Completion date for final report, February, 1966.

Agency: University of Illinois, Bureau of Economic and Business Research, under sponsorship of Housing and Home Finance Agency, in cooperation with Peoria City Lines, City of Peoria; Decatur City Lines, City of Decatur.

Previous Digest Report: None.

Research Problem. Bus transit ridership in medium-size cities has commonly dropped 85 percent over the last 15 years. Many systems have

gone out of business. The typical operation today involves high flat fares and limited service with old equipment. The high cost of street and parking facilities, coupled with the desirability of keeping public transportation, have renewed interest in somehow reversing the present trend in the fortunes of transit operations.

Method of Study. Combination of surveys and demonstrations. Surveys include (1) home interview consumer type, and (2) ridership characteristics of existing bus users. Demonstrations include (1) institution of a door-to-door home-to-work service operating on a monthly pass basis. Routes are personalized to requests for service; (2) provision of an off-peak shoppers' express service from an outer suburb, operating on regular headway and connecting with local services; (3) augmentation of service on other routes; and (4) installation of zone fares, as against flat fares, using automatic fare collection equipment developed at the University of Illinois. Service changes will be in operation for a minimum period of approximately six months. (MB)

60. TECHNICAL EDUCATION IN AND FOR RURAL AREAS

Main Investigators: Lloyd J. Phipps, Alfred H. Krebs, Paul E. Hemp, J. Robert Warmbrod and Gerald R. Fuller.

Status of Research and Publications: In process. Preliminary findings concerning workers in a region who need technical knowledge have been published. Completion date is anticipated as September, 1965 with final reports to be published.

Agency: University of Illinois, Vocational and Technical Education Department, Agricultural Education Division, under sponsorship of the Illinois State Board of Vocational Education and Rehabilitation and the University of Illinois, Bureau of Educational Research.

Previous Digest Report: None.

Research Problem. A study to identify in a representative rural region of Illinois the present and emerging technical occupations in business firms located in rural areas and in industries that serve rural areas, and to determine curricula for local and regional schools to prepare present and prospective workers for employment and advancement in these occupations.

Previous Relevant Research. The study, Vocational and Technical Education in Illinois, conducted by the University of Illinois, Bureau of Educational Research developed the framework which made possible and necessary a follow-up study designed to identify curricula for regional educational institutions as well as for local schools.

Method of Study. A fourteen county area in East Central Illinois designated by the Vocational and Technical Education in Illinois study as having sufficient population to support a comprehensive junior college, including technical education programs, was selected for study.

The population universe was the business firms in the region studied. The individual business firms were selected by a two-stage cluster sampling technique which involved stratifying the 183 telephone exchanges in the region on the basis of the largest town in each exchange, randomly selecting a stratified sample of 44 exchanges for further study, compiling a list of business firms from the "yellow pages" of each exchange in the sample, stratifying the businesses by type and randomly selecting a stratified sample of 422 business firms.

Trained interviewers collected data regarding curriculum development and employment projections from 511 observations. An observation was a job title in which an employee appeared to need technical knowledge and/or a knowledge of agriculture; job titles of unskilled and professional workers were not included. Data included 91 variables regarding knowledge needed for and activities performed in effective job performance.

Factor analysis procedures were used to assist in the development of curricula. An orthogonal rotation factor analysis solution was used to identify groups of variables which clustered together and correlated highly with hypothetical variables (factors) that were relatively independent from each other. The variables that accounted for the majority of the variance in each factor were used to describe the factors. Factor scores for each observation were computed to determine the influence of the factor on the observation. These data are presently being used in the identification of curricula.

Major Findings. Preliminary findings indicated that for the fourteen county region studied, there were a total of 77,868 workers (excluding unskilled and professional) currently employed in businesses that are agriculturally oriented, businesses that are not agriculturally oriented but often employ workers who must have competence in agricultural knowledges and skills and non-agricultural businesses employing technicians or workers needing technical knowledge in the areas having a population center of 25,000 or less with 1,282 workers being identified as technicians. These data indicated a need due to growth for 2,026 additional workers having some degree of post-high school technical education of less than college level within the next five years with 290 of these being classified as technicians. (GRF)

61. INDUSTRIAL INCENTIVES FOR WATER POLLUTION ABATEMENT

Main Investigators: Howard N. Mantel and Ruth P. Mack.

Status of Research and Publications: Study completed January, 1965. Report being printed by Government Printing Office for distribution by U. S. Public Health Service (Division of Water Supply and Pollution Control).

Agency: Institute of Public Administration, under sponsorship of the U. S. Public Health Service, Department of Health, Education, and Welfare.

Previous Digest Report: 11:1-40.

Research Problem. Background of industrial water pollution problems and impact on users; consideration of appropriate roles of Federal, State, local, and private organizations in an effective control program; effective use of legal controls and enforcement proceedings; consideration of financial assistance, primarily through tax abatement, accelerated depreciation, or other methods to assist industry in controlling pollution.

Major Findings. Study describes the increasing demand for good quality water, particularly by industry, and the limitations on supply. It concludes that stronger efforts must be made at controlling discharges of pollutants into the nation's rivers and other waterways. The report concludes further that the primary responsibility for abating pollution rests with the polluter; therefore, the major thrust of government-sponsored pollution control efforts should be aimed at stronger enforcement controls. However, some consideration may be given to one or more tax incentives or other subsidy programs, to private corporations, to enable them to offset the short-run financial difficulties of complying with Federal and State pollution control standards. (HNM)

62. INTERNATIONAL URBAN STUDIES PROGRAM

Main Investigators: Lyle C. Fitch, Randy H. Hamilton, Rodman T. Davis, Francine Rabinovitch, Ann-Marie Walsh, and Daniel J. Alesch. (Fellow).

Status of Research and Publications: In process. Publications planned include edited field reports on 15 metropolitan areas around the world; a manual on urban administration for the United Nations; book on comparative urban administration; monographs and bibliography.

Agency: Institute of Public Administration, in co-operation with the United Nations, under sponsorship of Ford Foundation.

Previous Digest Report: 11:1-38.

Research Problem. A comparative study of urban administration in selected metropolitan areas around the world with different populations, rates of growth, cultural, social, economic, and political backgrounds. Data collected from a questionnaire to be completed by field investigators in each of the areas will be analyzed, focusing on common organizational arrangements and administrative adaptations. (HNM)

63. MENTAL HYGIENE LAW RECODIFICATION

Main Investigators: Howard N. Mantel, Grant H. Morris, and George Heroux.

Status of Research and Publications: Project commenced 1964; draft of new law to be completed by March, 1966; occasional legal research papers to be published seriatim.

Agency: Institute of Public Administration, under sponsorship of Department of Mental Hygiene, State of New York.

Previous Digest Report: None.

Research Problem. Revision of laws of New York State governing admission, treatment, and care of mentally ill, mentally disordered, drug addicts, alcoholics, mentally retarded, and other mentally ill or disordered patients. Project includes research into problems of department administration and organization, civil rights of patients, intergovernmental relations, community mental health programs, and related topics. (HNM)

64. REGIONAL DEVELOPMENT AND PLANNING: A READER

Main Investigators: John Friedmann and William Alonso.

Status of Research and Publications: Completed and published.

Agency: Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. National policy for regional economic development. Writings on regional development and planning which are considered major contributions are brought together in one volume. Topics considered include location theory; theory of spatial organization; role of resources and migration in regional development; role of the city in regional development; problems of peripheral rural areas; definition of regions; concept of planning regions; objectives and measures of regional development; regional investment criteria; and institutional aspects of regional development planning. (WWS)

65. COMPUTER METHODS IN THE ANALYSIS OF LARGE SCALE SOCIAL SYSTEMS

Main Investigators: James M. Beshers and others.

Status of Research and Publications: In press.

Agency: Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University.

Previous Digest Report: None.

Research Problem. Proceedings of a conference held October 19-21, 1964. Contains papers on work in process in many substantive areas: demography, sociology, political science, economics, human biology, and related computer science developments. (JMB)

66. APPROACHES TO THE STUDY OF URBANIZATION

Main Investigators: Ethan P. Allen and others.

Status of Research and Publications: Published February, 1964.

Agency: University of Kansas, Governmental Research Center, Inter-University Seminar on Urbanization in the Missouri River Basin, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. An inter-university, inter-disciplinary faculty forum devoted to the study of urbanization in the Missouri River Basin.

Method of Study. Studies developed by scholars in the universities in the area were brought together for discussions in quarterly seminars.

Major Findings. The papers are divided into Quantitative Change, Qualitative Change, and Agents of Change. The studies under Quantitative Change include: A Geographic Study of Population Growth in the United States due to Net Migration; An Approach to Estimating Future Decline in Farm Population in the Great Plains and Its Implications for Small Cities; Industrialization and Population Change; Community Population Change; and Population Potential and the Level of Urban Economic Activity. Part two consists of topics on Qualitative Change and includes: A Theory of Urban Economic Organization, Managerialism and the Quest for Community, Social Integration and the Nature of Urbanization; the Agrarian Polity in the Era of Development; Containment Policies for Urban Sprawl; and Prelude to the St. Louis Borough Plan. Part three consists of topics on the Agents of Change; Social Variables and Organizing Efficiency; Power as Process in an Urban Community; Form of Government, Selection of Policy Makers, and Electorate Participation in Iowa Municipalities; The Location of Neighborhoods in American Cities; Urban Renewal and Partisan Change; and Ecological Change and Political Competition in Kansas. (WWS)

67. METROPOLITAN DATA CENTER PROJECT

Main Investigator: Anthony C. Medin.

Status of Research and Publications: Completed. Final report to be released June, 1965.

Agency: Five participating agencies, each focusing on a different part of the overall planning process as follows: Planning Office, City and County of Denver, Colorado (Comprehensive Land Use Inventory); City of Fort Worth, Texas (Central Business District Planning); Metropolitan Area Planning Commission of Pulaski County, Little Rock, Arkansas (School Facility Planning); Tulsa Metropolitan Area Planning Commission, Tulsa, Oklahoma (Community Renewal Program and related Urban Submittals); and Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas (Capital Improvement Program). Project is sponsored by Housing and Home Finance Agency, and is coordinated by a central staff, headquartered in Tulsa.

Previous Digest Report: 11:1-51.

Research Problem. Testing feasibility of (a) establishing, by use of electronic data processing equipment, a metropolitan data center for the storage and analysis of information concerning land use, housing condition and occupancy and related subjects, including environmental factors; and (b) maintaining the center so that the information may be kept up-to-date and be readily available to assist local agencies in making sound decisions on urban planning and urban renewal.

Major Findings. The concept of data sharing, where many agencies within metropolitan areas contribute data on a continuous basis to a single computer oriented file of information, has been successfully demonstrated through this study. Individual integrated information systems were established in each of the participating cities that coordinated all necessary data. This technique provided more economical retrieval operations, and for decisions based on a complete picture. Data sharing, through centralized computer systems, minimized duplicate data collection and storage, reduced unit costs appreciably, and thus increased the usefulness of data. Each integrated system required the development of standardized data definitions, as numerous data items required by city departments are given different interpretations and meanings. This operation insured that data was not limited to a single function, but primarily serves objectives of the city as a whole.

A new machine programming technique called "generalized programming systems" was successfully tested as the means for storing, maintaining, retrieving, and reporting of parcel information. A variety of processing routines are available to the user on call from a library tape. One program can handle all of the requests of the users. The program is unique in that all functions of the system are provided for in a self-contained package and are completely pre-programmed. Moreover, it is oriented toward easy access to reports which are difficult, if not impossible, to obtain in present-day reporting systems. Generalized programs provide flexibility for growth and change, efficiently and inexpensively. Many and varied formats can be recorded in the file. This capability has been profoundly demonstrated during the test period by the five cities use of a single generalized program. The system eliminates the tremendously high costs of redesigning information systems. As changes occur, the system can be modified to handle specific conditions without the need for expensive reprogramming.

The test has proven the need for intergovernmental cooperation within and between cities and counties, to create and maintain information systems. Use of the integrated approach with computer based systems, provided planners with a library of current information to produce more realistic plans. (ACM)

68. / RURAL TO URBAN LAND CONVERSION

Main Investigator: A. Allan Schmid.

Status of Research and Publications: In process.

Agency: Michigan State University, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. When a rural area is converted rapidly into an urban one, the result all too often is both unsightly and inefficient. Uncoordinated planning produces urban sprawl, and large-scale land speculation brings about high costs to the new residents and high prices for pockets of unused land. Analysis will be made of the forces that produce the situation, particularly of the processes by which capital is created both by direct investment and by asset appreciation on anticipated income. Current policies that affect land conversion processes are being examined to gain better understanding of the effects of the land market and conversion process on land use patterns, environmental characteristics, and development costs. Some of the fundamental issues concern the character of property rights in land, including questions of access, the distribution of costs and gains, and tax impact.

Method of Study. The study is primarily at the conceptual level concentrating on research needs and methods. Case studies of the Washington, D. C. area will be used for illustration. (AAS)

69. GAMING SIMULATION IN URBAN RESEARCH

Main Investigator: Richard D. Duke.

Status of Research and Publications: Completed. Available June, 1964, as a monograph, \$2.50.

Agency: Michigan State University, Continuing Education Service, Institute for Community Development and Services under a National Science Foundation Faculty Fellowship.

Previous Digest Report: 10:2-38.

Research Problem. To develop a dynamic gaming-simulation of urban land use decision processes to be used primarily for teaching purposes. Its potential value includes its ability to: make explicit the decision-making processes involved; enable player to view consequences of a previous decision while circumstances are fresh in his mind, through compression of time span; force player to view decision from various roles portrayed, creating a broadened perspective for his future actions; familiarize player with relative quantities (of land or money, for example) which are involved in the decisions; introduce various decision-assisting tools (capital improvement programming in this case); and force student to evaluate goals, objectives and value structure which are inherent in his decision.

Major Findings. The final report of this study introduces a new species of gaming-simulation--METROPOLIS, the urban land-use game, developed as a technique for training of specialists in urban planning. It simulates a community in which players assume key roles and relationships, becoming involved

simultaneously in public and private decisions which influence the game. Both dynamics of policy formation and consequences of individual decisions become explicit in the course of play. Publication includes an evaluation of potential of gaming-simulation in urban research, particularly as a device for estimating effects of best means of achieving particular objectives. Eight universal criteria for evaluation of gaming-simulation technique are presented. (RDD)

70. M.E.T.R.O. (MICHIGAN EFFECTUATION, TRAINING, AND RESEARCH OPERATION) PROJECT

Main Investigator: Richard D. Duke.

Status of Research and Publications: Project initiated December, 1964, completion scheduled within 32 months. A bibliography of Operational Gaming and Simulation in Urban Research, by Allan H. Schmidt and Richard D. Duke, was published in January, 1965, by Michigan State University, Institute for Community Development and Services.

Agency: Tri-County Regional Planning Commission, Michigan State University, and University of Michigan, under sponsorship of Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. To develop a convenient, flexible technique which has capacity to demonstrate to appropriate human decision makers consequences of alternative decision chains on metropolitan growth patterns, through use of a simulated, abstracted environment, employing a reduction of time span and dynamic interplay of current decisions with fixed policies. The instrument is intended to simulate growth patterns which would occur naturally and enable their comparison with planned growth patterns. In addition, M.E.T.R.O. will be designed (1) to illustrate kinds of information which are available to decision makers (e.g. data banks); (2) to inform decision makers about techniques which are available to evaluate and implement decisions (e.g. mathematical growth models and capital improvement programs); and (3) to provide information concerning implications for urban development which are associated with alternative courses of action.

Previous Relevant Research. This project is an extension of a study completed under a grant from the National Science Foundation. "Gaming-Simulation in Urban Research" which developed the technique for educational purposes, but along less sophisticated lines. One of the conclusions of this initial work was the potential significance of operational-gaming techniques for "real world" problems, testing solutions with the actual decision makers being involved.

Method of Study. Study will be carried out in three phases. Phase I will be concerned with detailed development of a conceptual model. During Phase II a proto-type instrument will be constructed. The various subgames (independent "roles") will be organized and tested, and initial calibration will be completed. A linking framework will be constructed, tested, and calibrated. Growth models of the Tri-County Regional Planning Commission will be modified to

accept input at each iteration, and to output necessary data at completion of each cycle. Phase III will be concerned with application of the instrument for Tri-County Regional Planning Commission. (RDD)

71. ORGANIZATION FOR COMPREHENSIVE RIVER BASIN PLANNING: THE TEXAS AND SOUTHEAST EXPERIENCES

Main Investigator: Robert H. Pealy.

Status of Research and Publications: Issued February, 1965, as Michigan Governmental Studies No. 46, 175 pp.

Agency: University of Michigan, Institute of Public Administration.

Previous Digest Report: 11:2-71. (RHP)

72. RIVER MANAGEMENT IN GREAT BRITAIN

Main Investigator: Lyle E. Craine.

Status of Research and Publications: In process. Completed report expected by August, 1965.

Agency: University of Michigan, School of Natural Resources, Conservation Department, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. The British Parliament recently enacted a comprehensive water policy (Water Resources Act of 1963) which, when it becomes fully effective in April, 1965, establishes public regulation of water flow and water use on every drainage system in England and Wales through creation of 27 public River Authorities. This Act represents most comprehensive water policy of any industrialized western democracy known to investigator. Project undertakes to understand (1) historical roots from which such a comprehensive policy has emerged and (2) institutional arrangements (legal authorities, organizational relationships and financial provisions) that have been provided to establish management control over rivers of England and Wales.

In the examination of both historical and new policy provisions, emphasis is given to relations between central and local governments and relations between river management and local planning activities under the town and country planning law.

Method of Study. (1) Study of relevant governmental reports and documents; (2) interviews with key officials in central government; and (3) field visits to examine experience of selected River Boards (forerunners to the new River Authorities). Analysis will stress historical description, focussing on evolution of river management concept, and comparative description in which parallels and contrasts with American scene will be emphasized.

Major Findings. (1) Concept of comprehensive river basin management in Great Britain is a response to post war social-economic conditions and need to make adjustments to natural water environment. It took 20 years of step-by-step half measures and of political debate to make comprehensive river management an explicit objective of government policy. (2) Post war pressures of population, urbanization and industrialization upon surface water resources in England and Wales are of kind and intensity that are only beginning to be experienced in selected areas of United States. (3) Policy strategy reflected in the British Water Resources Act of 1963 may have important lessons for U. S. in spite of many differences in culture and government. British experience may be most relevant in forging new State-local relationship regarding water control and use; its applicability to federal-state relations in America is probably very limited. (LEC)

73. RESIDENTIAL LOCATION AND URBAN MOBILITY

Main Investigators: John B. Lansing and Eva Mueller.

Status of Research and Publications: Continuing project. Two reports issued to date: Residential Location and Urban Mobility, by John B. Lansing and Eva Mueller, with Nancy Barth, June, 1964, 147 pp.; and Residential Location and Urban Mobility, a Multi-Variate Analysis, by John B. Lansing and Nancy Barth, December, 1964, 101 pp. May be ordered at \$2.00 each from Librarian, Institute of Social Research, University of Michigan.

Agency: University of Michigan, Survey Research Center, under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. Study of decisions made by urban families as to place of residence and use of local transportation, especially for journey to work.

Previous Relevant Research. Study is related to work of other investigators, such as: (1) Peter H. Rossi, Why Families Move; (2) Amos H. Hawley, The Changing Shape of Metropolitan America; (3) Stanley L. Warner, Stochastic Choice of Mode in Urban Travel; (4) J. F. Kain, A Multiple Equation Model of Household Locational and Tripmaking Behavior; (5) Edward T. Paxton, What People Want When They Buy a Home; and (6) Walter Y. Oi and Paul W. Shuldiner, An Analysis of Urban Travel Demands.

Hypotheses. General hypothesis, that transportation decisions depend among other variables on location of people's residences. Numerous specific hypotheses.

Method of Study. Intensive personal interviews of about 45 minutes average duration with a probability sample of 824 families selected to represent all families in metropolitan areas in United States exclusive of New York City.

Major Findings. (1) Residential locations may be described by density and distance from city center. Existing pattern of location is strongly influenced by family income and by stage in family life cycle. (2) A large proportion of potential movers would like to move to less urbanized locations, farther away from center of city into more rural setting. It appears unlikely that inconvenience or distance to work will be major deterrent to further outward migration. (3) Number of people wanting to move from apartment to single family house is much larger than number interested in opposite change. The recent boom in apartment demand reflects demographic and financial changes, but not a shift in consumer preferences. (4) Automobile ownership and mean number of miles principal family car is driven per annum depend upon income and to some degree upon distance from city center and age of city. (5) Choice of mode for journey to work does not appear to be sensitive to cost. Most people never have estimated cost of driving to work; those who have made estimates report widely varying costs per mile. (6) People overwhelmingly say they would prefer to go to work by car instead of by common carrier if cost were same and time also were same. A frequent complaint about common carriers is that they are crowded; on the other hand people like freedom of movement and convenience of travel by car. (JBL)

74. EFFECTS OF URBAN EXPANSION ON OWNERSHIP, USE AND TAXATION OF AGRICULTURAL LAND

Main Investigator: Frederick Charles Dopson.

Status of Research and Publications: Completed. (Doctoral dissertation.)

Agency: University of Missouri, Department of Agricultural Economics, under sponsorship of U. S. Department of Agriculture.

Previous Digest Report: 11:1-55.

Research Problem. Shift of land from agricultural to urban use, with special reference to procedures for orderly transition and avoidance of idle tracts which are by-passed and held only for speculation.

Method of Study. Analysis of assessment, taxation and transfer data on 267 rural tracts and on the lots in a recently developed subdivision in the Florissant area of St. Louis County, where land is desired for both urban and agricultural uses. Entire county was appraised during period 1958-1960, thus providing basis for objective before and after value comparisons.

Major Findings. Fifty-three per cent of the acreage transferred in the Florissant area from 1950 to 1962 (1,258 acres) was purchased by real estate interests. None had been developed by 1962. Wide variations in value adjustments as result of the 1958-1960 appraisal were noted. In general, land assessments increased, improvement assessments decreased. Small tracts increased more than larger tracts. Real estate interests had their land values increased more than farmers and other owners. The average per acre land tax, excluding improvements, was 74 per cent of estimated gross farm income. Of possible remedies--preferential assessment, public purchase of land or development rights, or deferred taxation--the latter appears to be most acceptable

from standpoint of fairness, legality and adequacy for revenue needs of local government. If adopted in conjunction with planning and zoning, it could lead to improvement in economic conditions in fringe areas. (FM)

75. METROPOLITAN ECONOMIC PROJECTION SERIES

Main Investigators: Sidney Sonenblum and Mannie Kupinsky.

Status of Research and Publications: Continuing project. First publication, giving historical data for 215 SMSA's now available. (Metropolitan Area Industry Employment and Population Estimates, 1950, 1957, 1960, 1962). National Planning Association, 1606 New Hampshire Avenue, N.W., Washington, D. C. 20009. 360 pp. \$40.00 per copy. Special offers available.) Projections for 95 metropolitan areas and description of projection technique in process.

Agency: National Planning Association.

Previous Digest Report: 10:2-47; 11:1-56; 11:2-72. (SS)

76. REGIONAL ECONOMIC PROJECTION SERIES

Main Investigators: Sidney Sonenblum and Ahmad Al-Samarrie.

Status of Research and Publications: Two publications are completed: revised state employment series, 1947-62; and state population, net migration, labor force and industry employment projected to 1975. Final publication in preparation.

Agency: National Planning Association.

Previous Digest Report: 9:2-56; 10:1-38; 10:2-48; 11:1-57; 11:2-73. (SS)

77. SUSQUEHANNA RIVER AND CHESAPEAKE BAY BASIN, ECONOMIC BASE STUDY

Main Investigators: Louis H. Stern and Vincent Arkell.

Status of Research and Publications: Final report due August, 1965.

Agency: National Planning Association under contract with the Public Health Service, Region III and the Corps of Engineers, Baltimore District.

Previous Digest Report: 10:1-49.

Research Problem. To divide the basin areas into economic subregions appropriate for study; inventory the economic characteristics of each of the subregions and make projections for approximately each decade for the next 50 years.

Method of Study. A procedure has been developed for making projections of the economic characteristics of an area which is greater than a county and less than a state. (LHS)

78. UPPER MISSISSIPPI RIVER BASIN, ECONOMIC BASE STUDY

Main Investigators: Louis H. Stern and George Novak.

Status of Research and Publications: Data collection approximately three-quarters completed.

Agency: National Planning Association under contract with Corps of Engineers, North Central Division.

Previous Digest Report: None.

Research Problem and Method of Study. Approximately same as in preceding abstract. (LHS)

79. IMPACT OF STATE AND LOCAL FISCAL POLICIES ON REDEVELOPMENT AREAS IN NEW ENGLAND

Main Investigator: James Wightman.

Status of Research and Publications: In process. Completion expected October, 1965.

Agency: New England Economic Research Foundation, under sponsorship of Federal Reserve Bank of Boston and Area Redevelopment Administration.

Previous Digest Report: None.

Research Problem. Extent to which various combinations of services and taxation influence location of different types of industries. Emphasis on central cities and suburban areas, and on tax-expenditure mix as a location factor. Special attention to the comparative influence of the state, and the basis of state distribution of funds.

Method of Study. Field survey in approximately twenty-five medium size metropolitan areas in New England and nearby states. In each area various tax costs (both state and local) will be calculated for three hypothetical but representative firms in locations in the central city and in two or three adjacent suburbs. Tax costs will be balanced against services provided in each place, and an attempt made to separate governmental services which are directly useful to the firms from those which are not. Proto-type firms will be in non-electrical machinery, textile mill products, and chemicals, and will be constructed with characteristics relevant to state and local tax cost - i.e., value of land and buildings, total in-state and out-of-state sales, payroll cost, etc. (JW)

80. APPLICATION OF ELECTRONIC DATA PROCESSING TO URBAN PLANNING SYSTEMS

Main Investigator: Herman G. Berkman.

Status of Research and Publications: In process. Completion expected April, 1965.

Agency: New York University, Graduate School of Public Administration, Program in Urban and Regional Planning and Housing.

Previous Digest Report: None.

Research Problem. Traces need for unified information systems in urban planning. (HGB)

81. APPLICATION OF PRINCIPLES OF CONSERVATION TO THE DEVELOPMENT OF LOW RENT HOUSING FACILITY

Main Investigator: Troy Westmeyer.

Status of Research and Publications: In process. Completion expected September, 1965.

Agency: New York University, Graduate School of Public Administration.

Previous Digest Report: None.

Research Problem. Traces the use of existing housing for public housing purposes. (HGB)

82. ELEMENTS OF STATE PLANNING WITH RESPECT TO THE LONG ISLAND PLANNING UNIT

Main Investigators: Charlton F. Chute, T. Ledyard Blakeman, Bert Weinert, Milton Gabrielson, Herman G. Berkman, Perry L. Norton, Dick Netzer, Troy Westmeyer, William Leonard.

Status of Research and Publications: In process. Completion expected July, 1965.

Agency: New York University, Graduate School of Public Administration and Office of Regional Development, Executive Offices, State of New York.

Previous Digest Report: None.

Research Problem. To ascertain elements of state planning to be studied in an interface planning unit. (HGB)

83. DEVELOPER DECISIONS: FORMULATION OF A PRODUCER SUBMODEL TO FORECAST
RESIDENTIAL GROWTH

Main Investigators: Shirley F. Weiss, Edward J. Kaiser, Kenneth B. Kenney,
John E. Smith, and Donald A. Stollenwerk.

Status of Research and Publications: In "Developer Behavior: A New Dimension in Urban Growth," Research Previews (in press), Edward J. Kaiser (principal author) brings together the group's current thinking and research progress in the formulation of inputs for the producer submodel. A series of monographs will be published on completion of the various related research investigations underway (1965-67). Several unpublished theses and written reports summarize some of the separate projects undertaken in more detail: Donald A. Stollenwerk, "Cost Factors in the Choice of Subdivision Locations by Residential Developers" (unpublished Master's thesis, Department of City and Regional Planning, University of North Carolina, 1964); Kenneth B. Kenney, "Location Decisions of Residential Land Development and Building Firms in the Greensboro Urban Area" (mimeographed research memorandum, Center for Urban and Regional Studies, September 17, 1964); John E. Smith, "Sharing of Development Costs by the City of Greensboro: Policies for Paving, Water, Sanitary Sewer, and Storm Drainage and Records of Development Costs Maintained by Department of Public Works and Finance" (mimeographed research memorandum, Center for Urban and Regional Studies, November 9, 1964); John E. Smith, "Proposed In-Depth Interview for Probing the Developer's Decision and Related Literature Search on the Decisional Process and Ownership Patterns" (mimeographed research memorandum, Center for Urban and Regional Studies, January 14, 1965); Kenneth B. Kenney, "Subdivisions Recorded in Greensboro Urban Area: 1948-1963. Field Report and Procedural Manual" (mimeographed research memorandum, Center for Urban and Regional Studies, September 16, 1963). In addition 20 taped interviews with 16 different developers in three cities are on file at the Center. A doctoral dissertation by Edward J. Kaiser is currently in progress on developer decisions as the determinant of the spatial distribution of urban residential subdivisions. Another doctoral dissertation by Kenneth B. Kenney will focus on the land purchase decision and expand empirical observations to several additional cities.

Agency: University of North Carolina, Center for Urban and Regional Studies, Institute for Research in Social Science, Evergreen House, Chapel Hill, N. C. 27515, under sponsorship of Public Health Service, National Institute of Health.

Previous Digest Report: None.

Research Problem. The objective of this research is to develop a producer submodel contributing to the continued refinement of the Donnelly-Chapin-Weiss "Probabilistic Model for Residential Growth" (see Digest report 11:2-77). An understanding of the forces at work in the developer decision and the commitment to a specific location for residential development will enable the formulation of a producer submodel for forecasting residential

growth patterns. A complementary submodel focusing on household selection of residential location (consumer submodel) is also programmed.

Hypotheses. On the basis of the requirements of the model toward which we are working and consistent with interview findings to date, it is appropriate to think of the developer's behavior as essentially economic behavior. The land development firm produces and sells a product, namely, a residential package consisting of a combination of house, lot, and location. The objective of the firm is profit making. Its behavior can be viewed as an attempt to generate profit from its activities and decisions. Profit then becomes the criterion for decisions. The developer's decisions are concerned with alternative input combinations of land, capital, and labor as they are related to alternative output combination packages of house, lot, and location. Some of these packages will provide more profit from an investment in urban residential land development than will other combinations. The locational decision consists of a commitment to a site. The committed site provides one component of the input combination as well as one component of the output combination. The entrepreneur's profit from this operation is a function of how the output combination affects revenues as well as how the input combination affects costs.

Method of Study. In-depth interviews with developers, lending firms, and government agencies which set development policies where urban growth is taking place; Development Decisions Seminar for group listening and reaction to taped interviews, and formulation of questions for further probing; designation and quantification of inputs for submodel; machine testing of inputs; simulations runs and trial forecasts of commitments to residential growth areas; finally, evaluation of submodel in terms of requirements for over-all "Probabilistic Model for Residential Growth."

Major Findings. In-depth interviews have provided working hypotheses for the on-going research studies. Developer behavior has many variables. So far the spectrum describing developer behavior extends from one extreme of the "hunch" in locating subdivision land to the other extreme of the "scientific investigation" in evaluating available residential sites for their revenue potential. Development costs are not necessarily the determining factor in the selection or rejection of a site. The revenues produced by "situation characteristics" i.e., social location factors and accessibility, are of prime consideration. Comparative analyses are necessary, and planned, for other urban areas with similar and contrasting residential growth profiles. (SFW)

84. OPERATIONS RESEARCH IN MINERAL RESOURCE DEVELOPMENT

Main Investigators: J. C. Griffiths, L. J. Drew, J. McDivitt, DeVerle Harris, J. J. Schanz, and D. H. Sellers.

Status of Research and Publications: Research has been in process for three years and in terms of funding will be completed in fall of 1965. Research program will continue.

Agency: Pennsylvania State University, College of Mineral Industries,
Departments of Geochemistry and Mineralogy and Mineral Economics,
under sponsorship of National Science Foundation.

Previous Digest Report: None.

Research Problem. To explore applications of operations research
to problems in natural resource discovery and development.

Previous Relevant Research. Very little published work exists in
this field. Important papers are Allais (1957), Engel (1957) and Grayson
(1960) and the successful application of Statistics to gold mining (Sichel,
1952; Krige, 1951; Ross, 1950).

Hypotheses. Phase 1. In the Engel Model the distribution of resources
(prizes or targets) is random and binomially distributed; responses to explo-
ration tools are constant and random Poisson events. By attaching costs to
the search procedure and values to the resources found a profitability surface
may be constructed for any given exploration program. The grid drilling approach
is an attempt to set up success ratios from random search to compare with the
overall industry average; the random drilling without geological information should
be the worst case and incorporation of geological information should lead to
improvement in success ratios.

Phase 2. General geological principles underlying the genesis of ore-
deposits and their distribution are used as the basis for building this model
and the usefulness of the information is tested in setting up the classification.

Phase 3. The circumstances underlying the exploration and development
of oil and gas properties are used as the context for building the selection
procedure in incorporating uncertainty and restricted resources.

Method of Study. The first three years concentrated on three separate
phases: Phase 1. (J. C. Griffiths and L. J. Drew). The objective is to
establish a model which may be used to simulate the exploration for natural
resources; two different models have been tried - grid drilling using a random
start and the Engel Model (1957) - and they yield similar results in terms of
profitability. In this phase as little as possible prior scientific knowledge
is used in the models.

Phase 2. (J. McDivitt and DeVerle Harris). Dr. Harris has built a
model based on an algorithmic program incorporating information from a large
scale geologic map (1:250,000) which classifies the potential value of an
area into six value classes by multiple discriminant analysis. The program
used known areas as a basis for development and tested the classification on
an unknown area. By means of factor analysis and a Bayesian decision procedure
the algorithmic model would permit evaluation of any area with a suitable
geological base map.

Phase 3. (J. J. Schanz and D. H. Sellers). This phase consisted of
building a dynamic programming model for selecting an investment portfolio
under uncertainty associated with oil and gas development.

Major Findings. Phase 1. (1) Simulations by both the Engel Model and grid drilling lead to profitable programs over a wide range of conditions. (2) By varying the range of the nine parameters entering the (Engel) Model so that at least some real-world situations must be included it is shown that for large areas profitability is generally assured. (3) The grid-drilling program using realistic estimates of costs and returns and limiting resources to one kind agrees with (2) and, given large areas (e.g., State of Kansas), profitability is again reasonably certain. (4) A systems approach in which all resources are considered at one and the same time appears to be the most promising exploration approach to the development of natural resources.

Phase 2. The classification model built up in Arizona and New Mexico groups cells (sub-areas) into value classes and when applied to a new area (Utah and Northern Arizona) offers a means of detecting those areas of potential promise for more detailed and intensive exploration. Factor and discriminant analysis leads to a reduction of the geologic criteria from 26 to 9 variables.

Phase 3. Capital investment projects are considered in five major categories - drilling (exploratory and development), acreage (proven and unproven) and dense automation. The technique considers the cost, returns, and the degree of risk of each of the available projects in the framework of existing operations. The expected returns generated by the investments are known in the form of probability distributions determined by the range of likely outcomes. The computation involves dynamic programming, with elements dealt with by Monte Carlo simulation. Experimental results indicate the model to be successful. (JCG)

85. RECREATIONAL VALUE OF WATER QUALITY: THE DELAWARE ESTUARY - A CASE STUDY

Main Investigators: Paul Davidson, F. Gerard Adams, and Joseph Seneca.

Status of Research and Publications: In process. Preliminary paper to be read at Conference in Boulder, Colorado, July, 1965.

Agency: University of Pennsylvania, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To identify major causes of market failure in providing adequate outdoor water recreational facilities and to attempt to develop an econometric method of evaluating social benefits and costs for such recreational facilities. The method utilized will be a case study of the Delaware Estuary, but, hopefully, project will provide guidelines for similar estimates for other estuaries near large urban areas.

Method of Study. Present study has both theoretical and empirical parts. A rigorous theoretical model of demand and supply factors for water facilities has been developed. Analysis of supply aspects has benefited from cooperation of Delaware River Basin Commission and United States Public Health

Service which have provided sanitary engineering and biological expertise necessary to formulate technological aspects of production function. Information developed from a concurrently running PHS systems analysis of Delaware Estuary has been used to generate a cost function for various levels of water quality improvement. The demand and supply functions developed in the theoretical section aid in identifying causes of market failure and consequently aid in suggesting public policy required for allocating resources to reach level of water quality which maximizes social net benefits and public policy for rationing facilities to yield maximum benefits ~~once~~ quality reaches required level. The empirical section is mainly of a reconnaissance nature. PHS systems analysis is basis for cost estimates. Demand relationships for specific water recreational activities are derived primarily from analysis of data collected from 1400 households by Michigan Survey Research Center. A dummy variable regression technique is used to develop predictive demand equations for hypothetical future population of Delaware Valley. (PD)

86. TRIP LENGTH VARIATIONS IN THE PHILADELPHIA SMSA

Main Investigator: Anthony R. Tomazinis.

Status of Research and Publications: Final report, "Trip Length Analysis," published February, 1965.

Agency: University of Pennsylvania, Institute for Urban Studies, under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: 9:2-103.

Major Findings. The following major findings can be considered as indicative of tendencies found in the Philadelphia area and are not necessarily generally applicable. (1) Relationship between trip length variations and distance from the region's C.B.D. (a) The length of total auto trips from home, measured in travel time, appears to decrease when the distance between the trip origin and the C.B.D. of the region (hereafter called X) increases. Under the same circumstances, the lengths of the same type of trips, when measured in miles, appear to be statistically unrelated to variations in this distance. (b) The length of total transit trips from home, measured in travel time or miles, appears to increase when X increases. (c) The length of home-to-work trips, made by auto or mass transit, measured in miles, appears to increase when X increases. When the same trip length is measured in travel time, the transit home-to-work trips appear to increase in length when X increases. (d) The length of auto trips from all non-home trip origins combined, measured in travel time or miles, appears to decrease when X increases. (e) The length of transit trips from all non-home origins combined, measured in miles, appears to increase when X increases. However, for the same trips, when the trip length is measured in travel time, the variation in length appears unrelated to changes in distance between the district of origin and the CBD.

(2) The shortest non-home origin trips, measured in miles or travel time, appear to be the trips from retail land uses and from community services land uses, in each corresponding travel mode category. Similarly, the longest

non-home origin trips, measured in miles, appear to be from manufacturing land use and from storage, wholesale, and construction land uses. Measured in travel time, it appears that the transit trips from the above land uses plus the trips by all modes of travel from office land uses are the longest trips.

(3) Households of higher incomes appear to undertake longer trips in general. This general observation holds for total home origin trips, for home-to-work trips, and for trips by auto, transit, or all modes. There are, however, among the types of trips investigated, in this respect, significant differences in the tendency for trip lengths to increase in response to income increases. The most consistent increase of trip length appears to be in auto and transit trips measured in miles. The greatest difference appears to be between work trips of low-income and middle-income households.

(4) When the availability of expressway facilities is measured by the proximity between the district of trip origin and the nearest entry to the expressway system (called here Y), then the following three findings appear in the Philadelphia area: (a) For total auto home-origin trips and trip lengths measured in miles, there is no evident relationship between trip length and Y. When the length of the same trips is measured in travel time, a decrease of the trip length appears when the availability of expressway facilities increase. (b) For home-to-work auto trips, the trip length in miles appears to increase when the availability of expressway facilities increases. For the same type of trips, the trip length measured in travel time appears to be unrelated to the availability of expressway facilities. (c) For total auto non-home origin trips, the trip length, whether measured in miles or travel time, appears to decrease when the availability of expressway facilities increases. (RTM)

87. INTERNATIONAL HISTORY OF CITY DEVELOPMENT

Main Investigator: Erwin Gutkind.

Status of Research and Publications: Work completed on first and second volumes in an eight-volume series. First volume, Urban Development in Central Europe, 1964, Free Press of Glencoe. Second volume, Urban Development in Austria, Switzerland, and the Scandinavian Countries, (tentative title) will be published spring, 1965.

Agency: University of Pennsylvania, Institute for Urban Studies, under sponsorship of Rockefeller Foundation and Mary Reynolds Babcock Foundation.

Previous Digest Report: None.

Research Problem. This study will present a world-wide survey of the origin and growth of urban civilization. It will endeavor to describe and to analyze the continually renewed interplay of adaptation and re-adaptation of challenge and response, which has made cities in all parts of the world the most significant agents of renewal and decline, of expansion and contraction.

Within each geographical grouping of countries, relevant material is being reviewed under the following headings: the land, historical background, rural settlement, urban settlement, and survey of selected cities. Certain basic problems, such as the changing ideas of space and scale, are being considered in the beginning of the study. The study will conclude with a comparative analysis of city planning during the last 100 years. (RTM)

88. A PRACTICAL APPROACH TO LONG-RANGE PLANNING

Main Investigators: Ibrahim Jammal, Robert Coughlin, Judith Anderson.

Status of Research and Publications: One-year study, scheduled for completion fall, 1965.

Agency: University of Pennsylvania, Institute for Urban Studies, under sponsorship of Pittsburgh Plate Glass Foundation.

Previous Digest Report: None.

Research Problem. A practical approach to long-range planning which is not utopian or visionary, but a method to set goals for the future and trace a possible path from here to there.

Method of Study. Project has three stages. (1) A set of goals will be outlined as a desired end-state for the year 2000. These goals will be spelled out in as much detail as necessary on basis of current knowledge and speculation regarding trends. (2) By a process of deduction, working backwards through time, various intervening states, trends, and forces that would have to obtain for final state to occur will be elaborated as a system of change. (3) Current state and existing plans will be compared with rates and directions of change necessary to achieve the goals.

To illustrate and elaborate this approach, study will focus on Philadelphia region. Three long-range goals will be adopted: (1) the elimination of poverty; (2) the creation of a system of open space based on preservation of natural resources and balance of nature; and (3) widespread availability of certain technological innovations in transportation. The open space goal has already been mapped and measured as part of another study. The other two goals will similarly be given operational definitions, and the three goals together will form the future state toward which the system of change will be directed. End products of the application of this method will be proposals for specific new legal devices, capital expenditure programs, and social programs, all sequenced over time. (RTM)

89. REQUIREMENTS FOR OPEN SPACE LAND IN URBAN AREAS

Main Investigators: William L. C. Wheaton, David A. Wallace, Ian McHarg, William G. Grigsby, Nohad Toulon, Ann Louise Strong, and William Roberts.

Status of Research and Publications: Completed. Publication spring, 1965, by sponsoring agencies.

Agency: University of Pennsylvania, Institute for Urban Studies, under sponsorship of the Urban Renewal Administration, the Commonwealth of Pennsylvania, and the State of New Jersey.

Previous Digest Report: 9:2-108.

Method of Study. The value and location of unurbanized land in the Philadelphia SMA, classified according to its contribution to flood control and to an adequate supply of water, was determined from several independent sources, mapped, and tabulated. Legal, economic, financial, and planning problems associated with alternative methods of preserving this land were investigated; outdoor recreational requirements were calculated; and design concepts for open space explored.

Major Findings. That undeveloped land performs valuable functions in its natural state that are ignored by both the private market and public bodies in the urbanization process; that large reservations of open land can be made in metropolitan areas at relatively insignificant economic costs; that legal tools are available to protect open land at relatively low public cost; and that, in the case of the Philadelphia SMA, land requirements for outdoor recreation for the next twenty years can be readily satisfied on acreage which has high priority for preservation because of its contribution to flood control and the water supply. (RTM)

90. RELOCATION OF ELDERLY PERSONS

Main Investigators: Chester Rapkin, Mary K. Nenno, Grace Milgram, and Paul Niebanck.

Status of Research and Publications: In process. Completion expected June, 1966. One publication available, "Essays on the Problems Faced in the Relocation of Elderly Persons." 223 pp.

Agency: University of Pennsylvania, Institute for Urban Studies, and National Association of Housing and Redevelopment Officials, under sponsorship of the Ford Foundation.

Previous Digest Report: 9:2-104; 11:1-63.

Research Problem. Study as a whole is devoted to finding procedures for ameliorating the plight of elderly persons who are relocated because of urban renewal, highway construction, and other government programs. A background report is now being prepared, dealing with: characteristics and problems of elderly persons, particularly those who have been relocated or are in sections of cities which are likely to become redevelopment areas; existing programs of aid; the nature of the relocation process and the current relocation offices and staff; and the relationships among all of these. In the fall of 1963, as part of the project, the Ford Foundation gave grants of

varying amounts to agencies in New York, Providence, San Antonio, and San Francisco for demonstration projects testing means of alleviating the distress associated with relocation, particularly for elderly persons. A final report will be issued containing summaries of these experiments with a discussion of the possible application of lessons to relocation in other cities or to other groups of persons being relocated. (RTM)

91. EVALUATION OF QUEEN VILLAGE LOW-COST HOUSING DEMONSTRATION

Main Investigators: William Grigsby, Walter Weissman, Paul Niebanck, and Charles Burnette.

Status of Research and Publications: Demonstration will end in summer of 1966. Over-all evaluation will be completed shortly thereafter with a publication to follow.

Agency: University of Pennsylvania, Institute for Urban Studies and Institute for Architectural Research, under sponsorship of Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. To evaluate efforts of a private neighborhood corporation which is attempting to rehabilitate substandard dwellings for families with modest incomes (between \$4,000 and \$7,000 a year without any public subsidy). The corporation is operating in what has been a declining central city neighborhood for which no major improvement programs are scheduled in the next five or ten years. The corporation plans to experiment with several techniques for rehabilitating the properties, e.g., contracting one or a group of houses out to general contractors, developing its own work crew, and acting as its own general contractor with subcontracts for all work. Special efforts will be made to deal with the normally difficult job of getting mortgages for these dwellings in an old area. Both the sponsoring corporation and the neighborhood groups plan to support the project with various forms of community improvement action.

Method of Study. The Institute for Architectural Research is helping the corporation develop efficient evaluation, design, bidding, and control techniques and procedures for the rehabilitation work. On conclusion of the project they will evaluate the effectiveness of the construction techniques. The Institute for Urban Studies has set up records adequate for a complete evaluation of all aspects of the demonstration during its two-year life. Additional information will also be gathered on the nature of the changes that have and might be expected to occur in the community due to internal and external forces. The most important element of the evaluation will be a determination of the usefulness of the various techniques employed in helping to lower the costs of producing quality housing and to make it possible for families with modest incomes to acquire this housing. Another important element will be a study of the characteristics of the families who are attracted to these housing units and the factors which are responsible for their locational choice. Some consideration will be given to the nature of the social and

economic structure of the community and the recent and new housing market in the community as a background for the demonstration. (RTM)

92. MIGRATION AND URBANIZATION IN THE UNITED STATES, WITH SPECIAL REFERENCE TO RECENT TRENDS

Main Investigators: D. S. Thomas, H. T. Eldridge, and A. R. Miller.

Status of Research and Publications: Fourth report now available, Ann R. Miller, Net Intercensal Migration to Large Urban Areas of the United States, 1930-1940, 1940-1950, 1950-1960. (University of Pennsylvania, Population Studies Center, Analytical and Technical Reports No. 4, Philadelphia, Pennsylvania. May, 1964.) Includes estimates of net intercensal migration to each city of 250,000 or more population in 1960 and to its SMSA by sex, age and color, with an analysis of over-all trends and patterns. A fifth report will be published shortly. It is being prepared by Hope T. Eldridge and will present an analysis of estimated net intercensal migration between 1950 and 1960 for states, based on the census survival ratio method, and of the components of internal migration as measured by area specific survival ratios; in addition, it will contain a comparison of results obtained by various methods of estimating intercensal migration.

Agency: University of Pennsylvania, Population Studies Center.

Previous Digest Report: 9:2-109. (ARM)

93. HOSPITAL SYSTEM PLANNING FOR A METROPOLITAN REGION

Main Investigators: Robert E. Coughlin, and Walter Isard.

Status of Research and Publications: Research completed. (1) Coughlin and Isard, Planning Efficient Hospital Systems, RSRI Discussion Paper Series, No. 1, Regional Science Research Institute, GPO Box 8776, Philadelphia, Pennsylvania 19101. \$2.00. (2) Coughlin, Isard and Schneider, The Activity Structure and Transportation Requirements of a Major University Hospital, RSRI Discussion Paper Series, No. 4, Regional Science Research Institute, GPO Box 8776, Philadelphia, Pennsylvania 19101. \$2.00. (3) Coughlin, Hospital Complex Analysis: An Approach to Analysis for Planning a Metropolitan System of Service Facilities, unpublished Ph.D. Dissertation, University of Pennsylvania, 1964. (4) Additional publications forthcoming.

Agency: University of Pennsylvania, Regional Science Research Institute, under sponsorship of National Institutes of Health.

Previous Digest Report: None.

Research Problem. To develop analytic techniques useful for planning sizes and locations of short-term general hospitals which, as a system, would serve most efficiently needs of a metropolitan area. A system of hospitals is viewed as being made up of a number of individual hospitals, each of which is itself a system of interrelated activity units. Each activity unit experiences characteristic economies or diseconomies of scale. Offsetting these scale economies are transportation costs: as average size of hospital is increased, the necessary number of hospitals decreases and average trip distance to hospital increases.

The problem of planning an efficient hospital system consists, first, of choosing sets of activities to constitute individual hospitals. The output levels of activities are to be set with an eye to capturing scale economies and also so as to be compatible with the interrelated requirements of all the activities within each hospital. Second, it involves choosing locations for hospitals in such a way as to reduce transportation cost. An efficient system is defined as one for which the weighted sum of operating costs and transportation costs is minimum.

Method of Study. The analysis relies heavily upon the application and adaptation of a number of analytic techniques, such as input-output and industrial complex analysis. The form of the adaptation was determined largely by insights gained in gathering empirical data on hospitals, rather than by theoretical exploration.

A large amount of data relevant to planning hospital systems is brought together. Most of the data were obtained either from internal reports of hospitals or directly through interview of hospital officials. Three hospitals studied in great detail serve as prototypes. The data make possible preliminary measurements of the interrelationships among activities which constitute a hospital, the returns to scale of these activities, and the transportation requirements of hospitals. (REC)

94. COMPREHENSIVE PROGRAMMING OF PUBLIC FACILITIES

Main Investigators: Benjamin H. Stevens, and Robert E. Coughlin.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Regional Science Research Institute, under sponsorship of National Institutes of Health.

Previous Digest Report: None.

Research Problem. To develop analytic techniques and to identify functional relationships which would be useful to a city in formulating optimal combinations and sequences for constructing public facilities called for in its long range plan. Research will be conducted within framework of long range plan of an actual city. Research will be directed to identification of public goals, measurement of project contributions, and development of mathematical programming techniques. Focus will be on health related facilities.

Method of Study. The study will proceed at two levels: the measurement of contributions to goals of each project and the development of mathematical programming models.

Direct contributions of each project to its corresponding goal will be measured under the assumptions (1) that each project is scheduled alone and (2) that the sets of complementary projects are scheduled together. Marginal returns to additional projects of a given type will be estimated. The indirect effect which a contribution to a given goal has upon contributions to all other goals will be traced out.

The measurements desired will be sought through direct observation and interview, and by statistical analysis of both published data and detailed information available in the files of government agencies.

Mathematical programming procedures will be devised to select projects for each programming period and corresponding budget in such a way that contributions to goals will be maximized. The procedures must take account of the interrelations mentioned, and will make use of the parameters which the measurement will yield. (REC)

95. AN APPROACH TO URBAN COMPLEX ANALYSIS

Main Investigator: J. B. Schneider.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Department of Regional Science, under sponsorship of Committee on Urban Economics, Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To apply the methods of industrial complex analysis to a typical urban complex - the general hospital - to derive answers to the question: What combination of additions to existing facilities and construction of new facilities can meet a projected level of spatial demand at minimum cost?

Method of Study. The method of study utilizes the traditional long-range planning framework, namely: What are the long-range objectives? and What is the best way to obtain them? Projections of community need form the basis for determining the future requirements for hospital facilities. Multiple regression analysis will be used to relate age-sex, economic and social variables with the two primary components of hospital demand, patient rate and average length of stay. Once general objectives have been set the essential problem becomes one of simultaneously evaluating the four major cost categories which characterize the process of hospital system growth over space. These are: (1) the cost of expanding or contracting existing facilities; (2) the cost of constructing new facilities; (3) the cost of holding excess capacity in some facilities and (4) the increment or decrement in travel cost that is associated with a particular system-wide size-location proposal. The

basic procedure of input-output analysis will be used to estimate costs in the first two categories using three prototype facilities to represent a system. The interdependence of the first two cost categories with the second two over space and time will be estimated with a linear programming model of the "bounded variable transportation problem" type. Location rent levels, the locational pattern of excess capacity and the patient flow pattern will be used to evaluate the cost implications of alternative size-location proposals. A spatial interaction model of the Stouffer type will be used to describe and evaluate the hospital-patient (supply-demand) interaction over a metropolitan space. (JBS)

96. UNCLASSIFIED DEFENSE AND SPACE CONTRACTS: AWARDS BY COUNTY, STATE AND METROPOLITAN AREA, UNITED STATES, FISCAL YEAR 1964

Main Investigators: Walter Isard, and Gerald J. Karaska.

Status of Research and Publications: Completed and published, 1965, by World Friends Research Center, Inc., G.P.O. Box 7376, Philadelphia 1, Pennsylvania. 82 pp., 3 maps, offset, paper-bound. \$.25.

Agency: University of Pennsylvania, Department of Regional Science.

Previous Digest Report: 9:2-102; 10:1-64.

Research Problem. Geographic distribution of military contract awards by Department of Defense. First two publications reported information on distribution of prime awards for fiscal year 1960 and 1962. This monograph reports data for fiscal year 1964. The third number in this series is an Atlas which through a series of maps illustrates the geographic distribution of these military awards.

This monograph follows the form and content of its predecessors. It primarily presents data on unclassified awards by the Department of Defense. These data are contracts reported by the Commerce Business Daily and represent 51 percent of the total contracts reported by the Department of Defense. These awards are aggregated and reported for counties, Standard Metropolitan Statistical Areas (SMSA's) and States. For counties and SMSA's the data are listed by the four-digit Standard Industrial Classification.

For the first time, this monograph reports comparable data on contracts awarded by the National Aeronautics and Space Administration for fiscal 1964. Also for the first time, data are presented for the total Defense awards arranged by industrial categories for fiscal years 1960, 1962, and 1964.

Although the data are presented in unanalyzed form, the authors include descriptive materials on the areal distribution of contracts. These materials take the form of maps and location quotients which serve as measures of the unevenness of distribution of awards. In addition, summary tables giving major totals are included. (WI)

97. NEW TOWN HOUSES FOR WASHINGTON SQUARE EAST

Main Investigators: Bernard C. Meltzer, A. E. Simon, Bernard W. Camins, John J. Herd, Albert Eisen, and C. Preston Andrade, Jr.

Status of Research and Publications: Completed and published, November, 1964. (212 pp. Mimeographed) Publication is part of continuing project as described below.

Agency: City of Philadelphia, Redevelopment Authority through Albert M. Greenfield & Company, Inc. and University of Pennsylvania, Institute of Architectural Research, under sponsorship of Housing and Home Finance Agency.

Previous Digest Report: 9:2-110.

Research Problem. Filling in the gaps in Unit No. 2 of Washington Square East Urban Renewal area, in which about two-thirds of structures will remain. Present study is Phase II of a continuing study having several phases, as follows: Phase I, analysis of motivations and decisions accounting for new construction in older neighborhoods in Philadelphia during past decade. Phase II, development of solutions applicable for filling in gaps in Washington Square area for a middle and upper class market. Phase III, corresponding study for Morton Urban Renewal Area, a relatively low income neighborhood in Germantown. Phase IV, to be carried out subsequent to disposition of cleared sites, comparison of hypothetical solutions developed with actual marketing experience.

Method of Study. Development and analysis by architectural and real estate consultants of alternative solutions for seven selected sites representative of the variety of situations found in project area.

Major Findings. Report presents 15 recommendations dealing with marketing considerations (context of the development, type of development, sequence of renewal and development, and size of sites; utilization of sites; and land disposition). (SK)

98. RENEWAL OF TOWNS AND VILLAGES

Main Investigator: George S. Duggar.

Status of Research and Publications: In process. Publication prior to June 14, 1965.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, for International Union of Local Authorities, with cooperation of International Federation for Housing and Planning.

Previous Digest Report: 3:1-29; 4:1-2; 7:1-1; 10:1-68; 10:2-101. (GSD)

99. THE SHANGO CULT IN TRINIDAD

Main Investigator: George Eaton Simpson.

Status of Research and Publications: Published as Caribbean Monograph Series No. 2.

Agency: University of Puerto Rico, Institute of Caribbean Studies, under sponsorship of Ford Foundation, the National Institute of Mental Health, U. S. Public Health Service, and Committee on Productive Work, Oberlin College.

Previous Digest Report: None.

Research Problem. Acculturative process as it is seen in African and European cultural retentions, reinterpretations, and syncretisms of the shango cult in Trinidad, West Indies. Sociological, social psychological, and psychiatric aspects of cult life as revealed in cult organization, attitudes of cultists and non-cultists toward shango, relationships between shangoists and Shouters, recent changes in shango, and the functions of the shango cult

Previous Relevant Research. Wherever possible, attempt has been made to compare data on Trinidadian shango with materials on cults now available for Brazil, Cuba, Haiti, Jamaica, and Nigeria.

Method of Study. Field work in Trinidad. More than a score of cult centers were visited; intensive work was done in five shango establishments and in five Shouters churches. All informants were lower class persons whose education had been limited to a few years of primary education. Individual and group interviews were held before, during and after the ceremonies. Both ordinary and annual shango ceremonies were observed, as well as some of the preparations for healing rites and parts of actual procedures.

Major Findings. Few, if any, fully middle-class persons in Trinidad participate publicly in shango rituals, but it is not uncommon for a middle class individual, especially a lower middle class man or woman or someone who has moved up recently from the lower class, to consult a practitioner about a health or other problem. Unlike the shango cult among the Yoruba or southern Nigeria, the shango cult in Trinidad honors many deities in addition to Shango. The multiple soul concept of West Africa has been retained, but reinterpreted, in Trinidad as it has been in a number of New World countries. Dreams and visions, received during "mourning" or at other times, have some significance for the ordinary shangoist because they reveal to him the will of the powers, his "gifts" and his "work" in the cult. As in the cults in several New World countries, spirit possession is a highly important phenomenon. The Acculturative process in Trinidadian shango may be thought of in terms of full or nearly full African retentions, reinterpretations of African cultural elements, Afro-European syncretisms, and European borrowed traits and reinterpretations of European cultural elements. The cult is to be explained by historical, cultural, sociological, and social psychological factors. It has manifest consequences in that it gives its devotees a meaningful

world view which includes explanations of spirits, the rules of life, life after death and other basic questions. In addition, shango has a number of unintended consequences. Like all religions it establishes interaction within the family and community; it is a means of social control; it gives recognition to individuals through the roles they play in cult life; it provides emotional release from the ordinary frustrations of life and from the special frustrations which go with economic and political inferiority; it strengthens group identity; it gives support to the continuations of the status quo; and it contributes to the perpetuation of the multicultural heritage of the island. (SA)

100. DISTRIBUTION OF FAMILY INCOMES IN PUERTO RICO

Main Investigator: Fuat M. Andic.

Status of Research and Publications: Published as Caribbean Monograph Series No. 1.

Agency: University of Puerto Rico, Institute of Caribbean Studies, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. Effect of economic development on income distribution, with special reference to Puerto Rico. It deals with two related problems, namely, the effect of economic development on income distribution in general, and changes in income distribution in Puerto Rico in particular.

Hypotheses. There is empirical evidence to show that incomes are more equally distributed in developed than in under-developed countries. Existing arguments as to the effects of changing economic conditions on the distribution of incomes in developing countries are based on conclusions drawn chiefly from a study of the experiences of the developed countries of today. This study attempts to show that incomes become more equally distributed as economic development takes place, by making use of the data available for Puerto Rico.

Method of Study. The study is divided into two parts. In the first part three questions are considered. The first one concerns the likely effects of changing social and economic conditions on income distribution, in order to provide a general frame of reference within which a particular case can be examined. The second problem is the measurement of the degree of inequality. The relative advantages and disadvantages of different methods of measuring income inequality are discussed, an attempt being made to distinguish between measures of income inequality and laws of income distribution; as a result of the discussion the Lorenz curve and the concentration ratio are chosen as the measures to be used. The third problem concerns the effect of different definitions of income and income recipient upon the results obtained from a given set of data. The second part of the study is devoted to the examination of the Puerto Rican case. The changes in economic and social conditions over approximately the last two decades are examined from the point of view of their likely effects on income distribution.

Major Findings. The economic and social changes have tended to narrow income inequality. The tendency is indicated by the decline in the concentration ratios obtained from three sets of data, incomes of wage earners, incomes of all families, and taxable incomes, for different years and covering the period between 1941 and 1958. The effect of government finance has also been towards increasing the equality of incomes, even though a high proportion of total public revenue is derived from indirect taxation. The conclusion reached is that the distribution of incomes tends to become more equal as the process of economic development continues. (SA)

101. PRODUCTIVITY CHANGES IN PUERTO RICO, JAMAICA, AND TRINIDAD IN THE LAST FIFTEEN YEARS

Main Investigators: Alfred P. Thorne, and David Morales Arroyo.

Status of Research and Publications: In process. Completion expected mid-1965.
To be published by Institute of Caribbean Studies as a Caribbean Monograph.

Agency: University of Puerto Rico, Institute of Caribbean Studies, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. To find explanations for the spectacularly and unusually high values of the average annual growth rates during the last fifteen years.

Hypotheses. The explanation of the high percentage rates of growth lies (1) in structural factors, such as the shifting of labor from low-productivity traditional sectors to modern sectors of higher productivity; (2) partly in the statistical bases of national income and product estimates and deflators; and (3) partly in productivity increases in the modern and traditional sectors respectively.

Method of Study. Data are collected to substantiate and test the principal hypotheses. These are data on the contribution to real product and its rate of growth of the modern segments of each industrial sector and the traditional segments. They concern the method or methods of valuation, the estimated physical volumes, the estimated annual current price values, the deflated values, and the accuracy of the principal estimated values. (SA)

102. POLITICAL RELATIONSHIP BETWEEN THE FRENCH ANTILLES AND FRANCE, AND THE NETHERLANDS ANTILLES - SURINAM AND HOLLAND

Main Investigators: Thomas G. Mathews, Gerard Latortue, Fuat M. Andic, and Suphan Andic.

Status of Research and Publications: In process. Completion expected June, 1965. Publication either as a Government Document or within the Caribbean Monograph Series of the Institute of Caribbean Studies.

Agency: University of Puerto Rico, Institute of Caribbean Studies, under sponsorship of Ford Foundation and United States-Puerto Rico Status Commission.

Previous Digest Report: None.

Research Problem. The study first investigates the post-World War II development toward autonomy and/or departmentalization. It then investigates the general nature of the governments concerned, the powers reserved for France and Holland, and evaluates the degree of autonomy. It describes the political organization in the French and Netherlands Antilles, the relationship between central/federal governments and local departments/island governments, the economic ties with the metropolitan countries, and evaluates the attitudes and opinions of political leaders and pressure groups with respect to these relationships. (SA)

103. POLITICS AND SOCIETY IN THE WEST INDIES

Main Investigator: Gordon Lewis.

Status of Research and Publications: In process.

Agency: University of Puerto Rico, Institute of Caribbean Studies, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. Study is devoted to the former British West Indies. It discusses the social and political legacy of British Colonialism and the emergence of national society within the individual territories. It analyzes the structure of the economies; social, racial, religious and family relationships; the place of the government within the setting, and the style of politics. (SA)

104. FISCAL SYSTEM OF THE FRENCH AND DUTCH WEST INDIES

Main Investigators: Fuat M. Andic, and Suphan Andic.

Status of Research and Publications: In process. Completion expected end of summer, 1965. Publication in Caribbean Monograph Series.

Agency: University of Puerto Rico, Institute of Caribbean Studies, with funds provided by the Ford Foundation.

Previous Digest Report: None.

Research Problem. Study covers the French overseas departments of Guadeloupe, Martinique and French Guiana, and the internally independent Dutch territories of Surinam, Curaçao and Aruba. Main focus is on the tax systems of these countries. Account is given of the individual taxes, their

assessment and collection, their yield and their importance within the framework. Accounts are also given of government expenditure. The historical background of the countries concerned and their present political, social and especially economic setting are taken into consideration. Fiscal relations with France and Holland and their role in the economic development of the areas are investigated. (SA)

105. A DYNAMIC PROGRAMMING-MARKOV CHAIN APPROACH TO FOREST PRODUCTION CONTROL

Main Investigator: James N. Hool.

Status of Research and Publications: Completed, 1965. Publication anticipated in monthly scientific journals.

Agency: Purdue University, Forestry and Conservation Department, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To prescribe production control activities over time, in face of poorly predictable future forest conditions, in order to achieve a forest management objective such as profit or product yield maximization, or cost minimization.

Method of Study. A general analytical method, called the Dynamic Programming-Markov Chain algorithm, was used to solve the problem. The algorithm combines the recursive decision-making process of dynamic programming with the theory of Markov chains. Given a set of Markov chain matrices, each of which describes all possible responses of a forest area to an implemented production control activity, it is possible to prescribe for any planning interval the optimal control activity to implement for every possible forest condition at any point during a planning interval, to achieve some specific management objective. Due to the nature of implementation of forest production control activities, it was necessary to refine the definition of forest conditions to make the algorithm compatible with the problem.

Major Findings. A case study was made on a forest property to demonstrate and verify the applicability of the problem approach. All results obtained in the case study were consistent with expectations, and also many current forest production control practices. The approach was found to place strong reliance on data systems, however, but did not eliminate the need for the field forester's judgment in implementing prescribed activities. (JNH)

106. A CITIZENS' HANDBOOK ON NUCLEAR POWER AND REACTOR SITING

Main Investigator: S. J. Socolar.

Status of Research and Publications: Manuscripts now undergoing critical review; publication as monograph expected early 1966.

Agency: New York Scientists' Committee for Public Information, Inc., under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To provide in a form usable by non-specialists a compendium of technical principles and information needed for dealing with issues of public policy on civilian nuclear power, particularly on the siting of reactors. The weighing of risks against advantages in such policy decisions entails essentially non-technical judgments, but only a technically informed public can participate intelligently. The project does not aim at policy recommendations. (SJS)

107. THE IMPACT OF URBAN RENEWAL ON LAND USE

Main Investigators: Edward F. R. Hearle, and John H. Niedercorn.

Status of Research and Publications: Published June, 1964.

Agency: The Rand Corporation.

Previous Digest Report: None.

Research Problem. To assess the impact of urban renewal projects on land uses within project areas.

Previous Relevant Research. John Niedercorn and Edward F. R. Hearle, "Recent Land Use Trends in 48 Large American Cities," published in Land Economics, Vol. 40, No. 1, February, 1964, pp. 105-110.

Hypotheses. That urban renewal projects may be expected to change land uses within project areas and to reflect public goals to a greater degree than development or redevelopment under purely private auspices.

Method of Study. Examination of data reflecting land use proportions, before and after renewal, in 297 urban renewal projects within 102 cities.

Major Findings. The major impact of urban renewal within project areas is to double the land area devoted to industrial uses and to triple the area used for public purposes; residential area is sharply reduced, commercial area is increased, and street area is left about the same. Residential population densities within project areas are shown to decline slightly from 55.96 to 51.40 dwelling units per acre. (EFRH)

108. COST OF URBAN SERVICES

Main Investigator: Not reported.

Status of Research and Publications: Completed and published, 1965.

Agency: Salt Lake County Planning Commission, under sponsorship of Housing and Home Finance Agency.

Previous Digest Report: None.

Research Problem. To determine comparative costs of providing selected urban services to compact and scattered residential areas.

Method of Study. Dwelling unit counts for the various districts and routes were obtained from land use data collected by the Salt Lake County Planning Commission in May, 1960, and from United States Census of Population and Housing Reports for April, 1960. Costs per dwelling unit were computed for the following services: sewer, water, garbage, mail delivery, school transportation, and police protection. No meaningful way could be found to ascribe the cost of fire protection, streets, health, and leisure time services to specific areas because of lack of data and features peculiar to each of these functions. Public officials and other informed parties were canvassed for statistics and expressions from which costs could be computed. (WWS)

109. DEVELOPMENT OF NON-WHITE POLITICAL ORGANIZATIONS IN SOUTH AFRICA

Main Investigators: Gwendolen M. Carter, Thomas Karis, and Sheridan Johns.

Status of Research and Publications: In process. Publication of first volume of documentary survey, covering African politics only, planned in late 1965 or early 1966.

Agency: Smith College, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. In the white-dominated, multi-racial situation of South Africa what have been the roles of non-white political organizations with particular attention to their philosophies, tactics, interrelationships with one another, and attitudes towards white South Africa and its political parties?

Previous Relevant Research. Research in South Africa in 1953 and subsequently by Gwendolen M. Carter leading to publication in 1957 of The Politics of Inequality and various articles on South African politics; residence and research in South Africa in 1956-57 by Thomas Karis leading to publication of South Africa in Five African States (edited by Gwendolen M. Carter) in 1964; research in South Africa in 1962-63 by Sheridan Johns on history of left-wing politics in South Africa.

Method of Study. Collection and examination of the literature of the various non-white political organizations supplemented by interviews with past and present leaders of the organizations. (GMC)

110. POLITICAL DEVELOPMENT IN THE TRANSKEI: SOUTH AFRICA'S FIRST BANTUSTAN

Main Investigators: Gwendolen M. Carter, and Newell M. Stultz.

Status of Research and Publications: Research completed. Publication of research results in book form expected fall, 1965.

Agency: Smith College, under sponsorship of Ford Foundation.

Previous Digest Report: None.

Research Problem. Does "separate development" in the Transkei provide adequate outlets for the aspirations of the inhabitants of that area and, if expanded into other African areas of South Africa, a potential for resolution of South Africa's race problems?

Previous Relevant Research. Research in South Africa in 1953 leading to publication in 1957 of The Politics of Inequality, by Gwendolen M. Carter. Ph.D. dissertation research in South Africa by Newell M. Stultz, 1962-64.

Method of Study. First-hand interviewing and observation in the Transkei, coupled with review of relevant documents.

Major Findings. In that the Bantu areas of South Africa can support only a minority of the African population of the country, political developments in the Transkei and other Bantustans to come cannot eliminate race tensions in South Africa. These developments do allow, however, for some Africans to gain administrative and political experience. These individuals may have important roles to play if "separate development" is followed by another policy requiring Africans to assume leading political and administrative positions. (GMC)

111. MIGRATION AND THE SOUTHERN CALIFORNIA ECONOMY

Main Investigator: Joseph E. Haring.

Status of Research and Publications: Completed and published, 1964.

Agency: Southern California Research Council.

Previous Digest Report: None.

Research Problem. The relationship and effect of migration on the Southern California economy.

Previous Relevant Research. The Effect of a Reduction of Defense Expenditures upon the Los Angeles Economy, (1953). The Los Angeles Economy: Its Strengths and Weaknesses, (1954). The Next Fifteen Years: The Los Angeles Metropolitan Area, 1955-1970, (1955). Guides to Prosperity for the Los Angeles Economy, (1956). Manpower Outlook for the Los Angeles Area in the 1960's, (1957). The Costs of Metropolitan Growth, 1958-1970, (1958). The Southern California

Metropolis, 1980, (1959). An Approach to an Orderly and Efficient Transportation System for the Southern California Metropolis, (1960). Developing Southern California's Inland Empire, (1961). Jobs for the Future--Southern California, (1962). The Impact of Foreign Trade on Southern California, (1963).

Major Findings. Population and business growth will continue to be market-oriented in Southern California. The great increases in number and earning power of consumers will continue to attract business firms and to stimulate business activity. The business climate in Southern California is good enough to attract a continuing flow of business firms and to stimulate the growth of those already there. Business and public policy must continue to be formed with an eye to its impact on the business climate if prosperity in this part of the United States is to be maintained. Migration is expected to double the rate of population growth over the next decade, and is thus contributing to the problems that must be faced by business and the public. Southern Californians are already familiar with population growth in newly settled areas, for most of Southern California is a newly settled area itself. Problems such as land use planning, school construction, and the construction of roads, water, and sewer systems are commonplace in this land. But continued growth in the area has made the population conscious of these problems. Rising land prices--a concomitant of rapid population growth--have led to increased land planning. (JEN)

112 RECRUITMENT AND DEVELOPMENT PATTERNS OF LEADERSHIP IN THE NEGRO COMMUNITY A CASE STUDY

Main Investigators: Elliott Rudwick, and Seymour Z. Mann.

Status of Research and Publications: In process.

Agency: Southern Illinois University (Edwardsville), Public Administration and Metropolitan Affairs Program.

Previous Digest Report: 10:2-20.

Research Problem. To assess forces which have given rise to the past and present leadership elements in the community and to examine and evaluate the forces at work producing the emergent leadership.

Method of Study. Since last report, additional leadership elements have been added through a positional-reputational scheme. Civil rights organizations, selected professional groups and a complex of Negro civic organization leaders are now in the respondent group.

During the summer of 1964 an additional contact grouping was investigated. This was a sample of East St. Louis 1964 outgoing high school seniors. Their perceptions of events and leadership problems were tested against findings from adult studies.

In addition to interviewing program, an historical analysis was commenced. Data are being analyzed and organized to provide an interpretative history of the Negro community in relationship to the equal opportunities struggle.

Major Findings. Adding to the scope of the study has lengthened considerably the time originally planned to devote to it. Findings at this stage must be considered both preliminary and incomplete. The items requiring the listing of good or bad points of the community by the respondents seem to indicate that a significant number of persons feel potential opportunities, recent desegregation gains, and the increasing Negro majority population are the best that can be said for East St. Louis. Its major bad points are believed to be community apathy, unemployment, discrimination, lack of leadership and the political situation. An interesting unanimity between the most successful and recently unsuccessful politicians occurs in their mutual mention of public apathy as a major problem. Throughout the interview schedule, repeated accusations, dire pronouncement and past experiences all center on the current political situation. A significant majority of persons interviewed place responsibility for misuse of taxes, mismanagement of government, malfeasance in office, the general increase in blight, increased taxes--reduced services, and unemployment on the doorstep of politics. In summary, the warp and woof of leadership dynamics is politics. Aspiration for leadership status and maintaining status as a leader is relative to one's ability to remain politically solvent. Also found in the pattern of leadership is the mutual distrust and lack of majority identification of any single person or persons as the leader(s) of the community. Further discord is evident in the lack of agreement on major problems. What is unanimous is the consensus that politics is in some manner involved in all issues.

Preliminary analysis would seem to indicate the East St. Louis Negro youth still fall predominantly into the mold which adult leaders characterized as typical for the Negro adult population. The Negro youth are not, on the whole, seriously concerned with nor do they express a desire for involvement in current civil rights and equal opportunity issues and activities. They tend to express the same conclusions as are thought to be held generally among the Negro population in East St. Louis about other problems of the city, and they seem to exhibit the same general beliefs that nothing can or will be done about such problems. They see any change as dependent upon political power and how it is used in the community. The recognition of political influence is shared by almost all respondents but they all have little hope that political power will in some way be redistributed or used in ways different from current practice. (SZM)

113. INTRA-COUNTY TAX UNIFORMITY

Main Investigator: Leo Cohen.

Status of Research and Publications: In process. Completion expected June, 1965.

Agency: Southern Illinois University (Edwardsville), Public Administration and Metropolitan Affairs Program.

Previous Digest Report: None.

Research Problem. To measure the degree and analyze the problem of unequal tax assessments within assessment districts.

Method of Study. Sales ratio data have been made available by the Illinois State Department of Revenue for Madison and St. Clair Counties, the Illinois portion of the St. Louis SMSA, for the years 1954-1959. Assessment is by elected township assessors in Madison County and by an elected County Board of Assessors in St. Clair County. Median assessment-sales ratios and coefficients of dispersion make it possible to measure nonuniformity within the County and within each township for various property classes, between property classes, and by sales value classes. (SZM)

114. DISCOUNT CRITERIA FOR PUBLIC INVESTMENT PROJECTS

Main Investigator: Kenneth J. Arrow

Status of Research and Publications: In process

Agency: Stanford University, Institute for Mathematical Studies in the Social Sciences, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Public investment projects, like all others, involve a comparison of benefits spread out over a long period of time, with costs incurred usually in a relatively short initial period. To commensurate benefits and costs in order to evaluate the worthwhileness of the project, it is necessary to discount future benefits at some appropriate rate. The problem is to determine what rate could be said to have certain characteristics of optimality.

Previous Relevant Research. F. P. Ramsey, "A Mathematical Theory of Saving," Economic Journal, 38 (1928): 543-99. O. Eckstein, "Investment Criteria for Economic Development and the Theory of Intertemporal Welfare Economics," Quarterly Journal of Economics, 71 (1957), 56-85.

Method of Study. The point of view is essentially theoretical, with some simple empirical assumptions. It is taken for granted that the aim of welfare policy is to maximize the sum of the discounted utilities of consumption over time. In other words, public investment in particular is evaluated as its contribution to discounted consumption. It is essential to consider the factors which determine the allocation between saving and consumption in the private sector; these play an important part in the mechanism by which public investment is carried out. For the present purposes the simple hypothesis is maintained that savings is a fixed fraction of disposable income. The aim then is to optimize welfare, previously defined, subject to production constraint by which output depends upon private and public capital and the labor force. Technological progress is taken into account.

A second important consideration is the role of risk in setting the discount rate. The point of view here is that the government is charged with the maximization of the expected utility of the entire nation, and the riskiness of individual projects is considered in this light.

Major Findings. The investigation is still incomplete. Nevertheless it is possible to characterize an optimal growth path under the assumptions previously noted. The optimal solution tends toward a steady state of growth in which the rate of interest appropriate for public investment is the rate of interest determined by time preference. This would be true even if the rate of interest in the private sector differs sharply from this. It is also concluded that the government should, in most normal circumstances, disregard riskiness, i.e., consider only the expected value of benefits and disregard their uncertainty. (KA)

115. METROPOLITAN AMERICA: GOVERNMENTAL SYSTEMS AND FISCAL PATTERNS

Main Investigators: Alan K. Campbell, and Seymour Sacks.

Status of Research and Publications: Scheduled for publication fall, 1965, by Brookings Institute.

Agency: Syracuse University, Maxwell Graduate School of Citizenship and Public Affairs, Metropolitan Studies, under sponsorship of Brookings Institution.

Previous Digest Report: 10:1-74.

Research Problem. Determinants of fiscal patterns of local governments in metropolitan America with careful analysis of the roles of governmental systems, socio-economic characteristics and the multi-interrelationships of the fiscal variables. To measure these relationships the patterns between and within metropolitan areas and the determinants of these fiscal patterns are examined in considerable detail. Central emphasis is place on the governmental structure within and between states, and the investigation demonstrated that the patterns of both revenues and expenditures are fundamentally related to these structural differences.

Major Findings. Revenues and expenditure patterns in metropolitan areas show a significant response to the assignment of direct functional responsibility as between state and local governments and to state aid. This influence is thoroughly analyzed in conjunction with the more traditional economic, social and demographic variables. The differential impact and interrelations of these variables are measured.

The analysis included the 48 conterminous states with particular attention to the 45 states possessing metropolitan areas and covers in detail 36 SMSA's in 16 states. Each of these 16 states possesses clearly different divisions of state-local responsibility and financing. Each of the 36 SMSA's is analyzed in its totality, and its major components: the central city and what is technically known as the outside area. Account is taken of annexations and their fiscal implications. In addition, a regional analysis is undertaken based on statewide aggregates.

The report describes the fiscal and governmental systems of metropolitan America and analyzes statistically their interrelationships. Policy

implications emerging from the study will be made explicit, and particularly valuable will be the indication of the policy alternatives possible within different state-local structural systems. (JL)

16. THE SECOND-MOVE SUBURB: AN EXPLORATORY STUDY

Main Investigators: Philip Meranto, and Judith Launer.

Status of Research and Publications: Manuscript completed.

Agency: Syracuse University, Maxwell Graduate School of Citizenship and Public Affairs, Metropolitan Studies.

Previous Digest Report: None.

Research Problem. Classification of residential suburbs according to genesis of their populations. Comparative analysis of their characteristics.

Previous Relevant Research. Work of William Dobriner and Leo F. Schnore in typing suburbs according to their employment characteristics, and differentiating between "employing" and "residential" suburbs. Present study attempts further refinement of "residential" category.

Method of Study. Case study of New York and Chicago SMSA's, based on 1960 Census. Determination of proportion of 1960 residents for each suburb which had migrated from central city or other parts of metropolitan area since 1955. Calculation of ratio of central city migrants to "other parts" migrants, and classification according to this ratio.

Major Findings. "Second move" suburbs, defined as those with a ratio exceeding 1:2, differ substantially relative to several socio-economic variables and can be said to be of higher status than first or intermediate move suburbs. (JL)

7. POTENTIAL ECONOMIC DEVELOPMENT OF THE UNITED STATES SOUTHWEST

Main Investigators: Benjamin Higgins, Warren Adams, Forest G. Hill, David Huang, Stephen L. McDonald, and Eastin Nelson.

Status of Research and Publications: Summary of some findings published as "Some Factors in the Recent Economic Development of the Southwest," in Southwestern Social Science Quarterly, March, 1965. A series of articles, first of which is "Growth of Per Capita Personal Income in the Southwestern States Since 1920" in Texas Business Review, November, 1964, is planned. Two major volumes, one dealing generally with regional integration and national economic development, and the other specifically with the Southwest, are presently in manuscript form.

Agency: University of Texas, Department of Economics, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: 9:1-65. (BH)

118. THE INDUSTRIALIZED URBAN ENVIRONMENT

Main Investigator: Alan Temko.

Status of Research and Publications: In process. Completion expected, 1967.

Agency: Twentieth Century Fund.

Previous Digest Report: None.

Research Problem. Ways of mobilizing resources--political, social, educational, technological and economic--to re-order the disarray of our urban environment.

Hypotheses. The environmental crisis in the United States brought about by anarchic urban expansion is neither tolerable nor beyond solution.

Method of Study. Field observation in the field and study of documentary materials. (LF)

119. AMERICA'S PUBLIC ENVIRONMENT

Main Investigator: Edward Higbee.

Status of Research and Publications: In process. Completion expected, 1968.

Agency: Twentieth Century Fund.

Previous Digest Report: None.

Research Problem. In an urbanized society man passes his life in two environments: the private and public - his home and his community. In America his private standard of living may be high while the public environment where he lives collectively with others is demeaned and made ugly through neglect or misuse.

This study will be focussed on the public habitat and our attitudes toward it and will explore the alternatives for action needed to overcome the tensions and frustrations, the dangers and growing ugliness of the public places in which we live. (LF)

120. A GEOGRAPHY OF THE UNITED STATES

Main Investigator: George H. T. Kimble.

Status of Research and Publications: In process. Completion expected, 1966.

Agency: Twentieth Century Fund.

Previous Digest Report: None.

Research Problem. Since many of the pressing problems of our time have their roots in the unequal distribution of people, space and opportunity, this study is designed to illuminate the human as well as the physical geography of the U.S.A. It will give attention to the geography of natural resources and arable land, of farms that are too small, cities that are too cluttered, of poverty and affluence, of puritanism and segregation. Field studies of conditions in many parts of the United States are being made and the report will be accompanied by a specially prepared atlas of novel style and content. (LF)

121. SOUTHERN ECONOMIC DEVELOPMENT AND MANPOWER

Main Investigator: James G. Maddox.

Status of Research and Publications: In process. Completion expected, 1966.

Agency: Twentieth Century Fund.

Previous Digest Report: None.

Research Problem. The changes the South is experiencing are numerous and complex. Among the most important of them are: (1) a rapid movement of southern population to urban areas because of a pronounced decline in employment opportunities in agriculture coupled with an expansion in manufacturing, trade and service industries; (2) a greatly accelerated movement for equality of opportunity for Negroes of the region; (3) a growing emphasis on improving educational standards; (4) the possible growth of a two-party political system; and (5) a slow shift away from traditional views of agrarian ways of life and of attitudes toward race relations. The study while focussing on economic growth and employment opportunities in the South, will give consideration to virtually all aspects of the great transition through which southern society is now passing. (LF)

22. RELOCATION: UNEQUAL TREATMENT OF PEOPLE AND BUSINESSES DISPLACED BY GOVERNMENTS

Main Investigator: Albert J. Richter.

Status of Research and Publications: Completed. Publication spring, 1965.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: 11:1-5.

Research Problem. This is a study of Federal, State, and local government programs which necessitate relocation of families and businesses; the

laws, policies, and practices in providing for relocation, and their effects; and the intergovernmental aspects of problems arising in the most expeditious and equitable handling of relocation. Purpose of the study is to identify the nature and seriousness of relocation problems, including the lack of uniformity among governmental programs; appraise the pertinent governmental policies and programs; and suggest ways in which these policies and programs can be strengthened to help Federal, State, and local governments deal effectively and equitably with relocation.

Method of Study. (1) Questionnaire survey in cooperation with the U.S. Conference of Mayors of the relocation practices and problems of all cities over 100,000 population; (2) analysis of the responses from 100 cities and of data gathered by staff of Select Subcommittee on Real Property Acquisition, House Committee on Public Works, in its survey of property acquisition procedures of all direct Federal and federally aided programs; (3) appraisal of the equity, uniformity, and adequacy of relocation practices at all three levels of government; and (4) recommendations for legislative and administrative changes necessary by local, State, and Federal governments.

Major Findings. The Commission recommends that (1) Congress establish a uniform policy of relocation payments and advisory assistance for persons and businesses displaced by direct Federal programs and by grant-in-aid programs; (2) Congress require State and local governments administering Federal grant-in-aid programs to assure the availability of standard housing before proceeding with any property acquisition that displaces people; (3) with respect to financing relocation payments under federally assisted programs, that the costs of individual payments up to \$25,000 be completely reimbursed by the Federal Government, and amounts over that be shared on the basis of the cost-sharing formula governing the particular program; (4) the Small Business Administration Act be broadened to authorize disaster loans to small business concerns suffering economic injury due to State and local as well as Federal Government action, and authorize such loans to those that are adversely affected but not actually displaced by property takings; and (5) Congress amend the Manpower Development and Training Act to permit widow and widower owners of displaced firms to be eligible for manpower retraining allowances. The Commission recommends that each State (6) establish a uniform policy covering relocation assistance and payments for those displaced by State and local programs; (7) require State and local agencies to assure availability of standard housing before proceeding with any property acquisition that displaces people; (8) share in local governments' costs of providing relocation payments and services when such costs are incurred in programs for which localities receive State or Federal grants to which the State contributes part of the local share; and (9) along with regional organizations, assist local governments in planning for relocation. The Commission also recommends that (10) all government levels authorize and encourage agencies causing displacements in urban areas to centralize in a single agency in each major jurisdiction the responsibility for determining relocation housing needs and resources, for administering relocation payments, and for providing advisory assistance; (11) central cities offer to contract to provide relocation services to neighboring municipalities, and smaller units join together to provide such services; and (12) Federal and State agencies causing displacement give advance notice at the earliest practicable time to local units of general government of any construction program that will cause displacement. (WGC)

123. ROLE OF LOCAL, STATE, AND FEDERAL GOVERNMENTS WITH RESPECT TO BUILDING CODE
MODERNIZATION AND UNIFORMITY

Main Investigator: James H. Pickford.

Status of Research and Publications: In process.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. It has been claimed that savings of up to a billion dollars a year could be achieved by implementation of up-to-date uniform building codes for residential construction. At present, several privately developed national building codes are available nationally. The Federal Housing Administration employs its own national housing standards. Communities make further variations in such codes when adopted. Large scale home builders and manufacturers of building products unable to achieve the economies of national mass production have pressed for development and implementation of national codes. Labor is affected by the jurisdictional problems and building material requirement variations. This study would examine the possible roles of local, State, and Federal governments in meeting this problem.

Method of Study. An examination of all relevant literature, interviews with business and government officials, and a survey of overlapping of jurisdiction by agencies of State and local governments. (WGC)

124. COORDINATION OF FEDERAL, STATE, AND LOCAL PERSONAL INCOME TAXES

Main Investigator: Taxation and Finance Section.

Status of Research and Publications: In process.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. Personal income is now taxed by 36 States, the District of Columbia, and local governments in six States. In recent years, an increasing number of States have adopted Federal Revenue Code definitions for an increasing number of their provisions. Important progress has been made also in administrative cooperation. These developments should contribute to the feasibility of better inter-level tax coordination in behalf of simplification, ease of taxpayer compliance, reduced costs of administration, and improved revenue yield. The project will also consider how further Federal tax reductions might best be structured in the interest of constructive Federal-State tax relationships.

Hypotheses. Income taxation at several levels can and should be forged into an integrated fiscal instrument.

Method of Study. An analysis of the institutional, administrative, economic, and fiscal relationships between and among Federal, State, and local income tax jurisdictions and the import for national policy objectives. (WGC)

125. MULTI-COUNTY PROGRAMMING AND IMPLEMENTATION FOR ECONOMIC DEVELOPMENT

Main Investigator: Not reported.

Status of Research and Publications: Report completed and submitted July, 1964.
Publication plans indefinite.

Agency: U. S. Department of Commerce, Area Redevelopment Administration,
through contract with Robert R. Nathan Associates, Inc.

Previous Digest Report: None.

Research Problem. Determination of contributions which can be made to economic development process by a multi-county organization if the principles of development are applied with the support of a full-time professional staff.

Hypotheses. That development can be effected only by the people of an area, and that no preconceived plan can be imposed on them. That active participation from within area is an essential ingredient. That such participation can best be achieved by attacking problems with which area is already concerned and letting plans emerge from needs of the area as they are recognized.

Method of Study. Twenty-five month demonstration study in fourteen county area of Upper Peninsula of Michigan.

Major Findings. Multi-county development organization has merit where a number of counties share a common resource pattern. Availability of full-time professional staff to advise and do necessary technical work can help area to look at itself, determine its needs, and select a course of action. (SK)

126. A STUDY TO ESTABLISH CRITERIA FOR PROJECT SUPPORT

Main Investigators: John R. Meyer, and Gerald Kraft.

Status of Research and Publications: In process. Completion expected May, 1965.

Agency: U. S. Department of Commerce, Area Redevelopment Administration,
through contract with Regional and Urban Planning Implementation, Inc.

Previous Digest Report: None.

Research Problem. The use of economic activity variables or industrial growth data as indices of area economic viability can be a question begging activity. For area redevelopment policy, it is not nearly so important to know that such activity is consistent with area health as measured by the economic condition of the inhabitants as it is to know how such output is achieved. This

study is an attempt to find the effect of various physical, sociological and very long-run economic variables on long-run economic health. Included in the explanatory data are such variables as educational levels, terrain characteristics, proximity of large population centers, etc. At the same time, consideration is being given to various candidates for measures of area economic welfare such as income and unemployment.

Previous Relevant Research. Space prohibits such a listing here. However, such analyses as location theory and interregional multiplier theory are relevant. No previous empirical study is directly relevant, however, because adequate data for such intensive studies exist only for a few limited areas, if at all.

Hypotheses. That certain inherent, difficult to moderate characteristics differentiate prosperous from distressed areas, making the latter unattractive for industrial and commercial activity.

Method of Study. The study uses data on each of the counties in the contiguous United States for approximately twenty years. Samples of these counties have been selected depending upon whether they have been relatively high or low with respect to approximately thirty different economic welfare criteria. Sequential use of variance analysis and discriminant analysis is being used to find the variables accounting for the counties' location on the various welfare axes. (JK)

127. LOCAL LEADERSHIP IN COMMUNITY ECONOMIC PLANNING

Main Investigators: Sidney A. Fine, and Paul A. Banas.

Status of Research and Publications: In process. Completion expected September, 1965.

Agency: U. S. Department of Commerce, Area Redevelopment Administration, through contract with Human Sciences Research, Inc.

Previous Digest Report: None.

Research Problem. Role of local leadership in community economic redevelopment as manifested by Area Redevelopment Committees. Morespecifically (1) to determine the extent to which Area Redevelopment Committees assume leadership role in community economic redevelopment; (2) to develop criteria for evaluating effectiveness of Area Redevelopment Committees; and (3) to study determinants and/or correlates of differential Committee effectiveness.

Method of Study. Area Redevelopment Committees in 125 communities throughout the eastern and central portion of the United States have been selected for study. Questionnaires concerned with these committees and their redevelopment activities and progress will be sent to approximately fifteen local leaders in each of these communities. Both members and non-members of the Committee, representing the most active and knowledgeable members of the community when it comes to economic redevelopment, will be surveyed. (PAB)

128. EFFECT OF HOUSING AVAILABILITY ON EMPLOYMENT OPPORTUNITIES

Main Investigator: Everett J. Burt, Jr.

Status of Research and Publications: In process. Completion expected September, 1965.

Agency: Housing and Home Finance Agency, Office of Program Policy, through contract with Professor Burt.

Previous Digest Report: None.

Research Problem. Impact of relocation of large employers from Boston to Route 128 upon residential patterns and employment choices. (MJS)

129. CRITERIA FOR MEASURING HOUSING QUALITY

Main Investigator: Not reported.

Status of Research and Publications: In process. Publication expected summer, 1965.

Agency: Housing and Home Finance Agency, Office of Program Policy, through contract with Bureau of the Census.

Previous Digest Report: None.

Research Problem. This is one phase of a joint program sponsored by the Bureau of the Census and the Housing and Home Finance Agency with the long-range objectives of (1) developing criteria and methods of measuring the quality of housing for use in local surveys designed to determine needs for urban renewal and rehabilitation and (2) developing a method of obtaining data on the quality of housing in the context of an address-register census.

The immediate objectives are to study the adequacy of measures used in the 1960 Housing Census when applied to areas (blocks and tracts) as well as to individual housing units, and to devise and study the properties of new indices of housing and neighborhood quality where these indices are based on 1960 housing and population census data.

Method of Study. Four cities having a population between 100,000 and 200,000 in 1960 were chosen at random. Fifty-eight items of information, selected from the published 1960 Census tract statistics, were converted into twenty-seven variables. Multiple regressions and inter-correlation analyses were then made.

Major Findings. (1) At the tract level, condition of housing, as enumerated in the 1960 Census of Housing, is highly correlated with relatively objective housing and population characteristics. (2) The highest correlations were shown for the dependent variables, "Substandard," with "Deteriorating plus Dilapidated," "Deteriorating" and "Dilapidated" following in that order.

(3) The high order of correlation discovered thus far merits an expansion from the exploratory stage to a more extensive and intensive analysis.

Further Research. The method of investigation is to be applied to enumeration districts, blocks, and individual housing units in the four previously studied cities, plus two additional cities that will be included in the study.

To the extent that resources permit the HHFA contract will go beyond the data of the 1960 Census and incorporate an examination of the results of experimentation by the Bureau of the Census with new procedures designed for use in a self-enumerative (mail) census. (MJS)

130. THE HOUSING OF RELOCATED FAMILIES

Main Investigator: Not reported.

Status of Research and Publications: Completed and published.

Agency: Housing and Home Finance Agency, Office of Program Policy, through contract with Bureau of the Census.

Previous Digest Report: None.

Research Problem. (1) to obtain an objective survey on whether adequate housing has been provided for urban renewal displacees. (2) To acquire additional data on some aspects of relocation not covered in our regular reporting system in order to learn more about the problems these families face in adjusting to a new urban environment.

Method of Study. The 163 local public agencies (LPA's) in the United States, except Alaska and Hawaii, that had placed Urban Renewal projects in execution during calendar years 1962 and 1963 were asked to supply lists of all families relocated during the three-month period June 1 through August 31, 1964. Of the 163 LPA's selected, 132 had families who were relocated during the three-month period in question. Certified lists of the names and addresses of the families displaced during the June-August period were turned over to the United States Bureau of the Census. Between Thanksgiving 1964 and early January, 1965, Census interviewers located as many as possible of the relocation housing units and rated them as to condition and plumbing facilities. Selected household characteristics were obtained for households still living at the relocation address.

Major Findings. Ninety-four per cent of the displaced families were relocated in standard housing. Median gross rents were higher--\$74 compared with \$66 prior to relocation--while the median proportion of income spent for rent increased from 25 per cent to nearly 28 per cent. Nearly 2 of every 5 relocated families had incomes below \$3,000 and almost the same proportion had incomes between \$3,000 and \$6,000. Home ownership increased from 33 to 37 per cent. Most relocated families found that work and basic community facilities were at least as conveniently located as before, 66 per cent finding the convenience

of neighborhood shopping about the same or better, 71 per cent finding public transportation as satisfactory or better than previously, and 55 per cent reporting their church no farther away than before. Shifts in jobs following relocation were not substantial, with only 10 per cent of those with a fixed place of employment changing jobs in the period following the move. Thirty-seven per cent of the household heads with a fixed place of employment reported a longer journey to work. Seventy per cent of the families relocated themselves, although nearly 90 per cent of the households received counseling, financial, or other assistance from the local public agency during the relocation process. (MJS)

131. UNIFORM CODING SYSTEM FOR LAND USE

Main Investigators: Rodney E. Engelen, and Robert B. Teska.

Status of Research and Publications: Published March, 1965, as "Standard Land Use Coding Manual." 111 pp. \$.50. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Agency: Housing and Home Finance Agency, Urban Renewal Administration and U.S. Department of Commerce, Bureau of Public Roads, through contract with Barton-Aschman Associates, Inc.

Previous Digest Report: 11:1-10. (SK)

132. THE DEVELOPER BUYS LAND - DECISION-MAKING IN A CHANGING ENVIRONMENT (2)

Main Investigator: Carol A. Scharf.

Status of Research and Publications: In process. Publication expected in winter, 1965-66.

Agency: Washington Center for Metropolitan Studies.

Previous Digest Report: None.

Research Problem. Planning the outward expansion of metropolitan Washington has met with repeated failure. Area-wide and local land-use plans and planning tools have not succeeded in guiding development. To establish why land-use planning has gone awry in affecting the land market and to show the attendant costs to the private developer are the two major problems of this exploratory study. One apparent reason for costly, unsuccessful planning is that it has been based on an inadequate understanding of the economic relationships between planning, land values, and land development.

(2) This study complements a study which Dr. A. Allan Schmid is conducting for Resources for the Future, Inc. (See Item 68.)

Through investigating the developer's demands for land as revealed in the circumstances surrounding his land-purchase decision the study analyzes some of these important economic relationships in land-use planning - particularly the impact of planning methods on the developer's anticipated cost-and-return situations.

Method of Study. Several case studies of large, local developers specializing in subdivisions and discussions with knowledgeable individuals have provided the qualitative information for this research. The developers have related their own experiences and also given their impressions of the aggregate behavior of the local, fringe land market and the local development industry.

Major Findings. Exploring the behavior of the development firm has produced a set of hypotheses and sub-hypotheses describing the relationships between exogenous economic and political factors and a firm's performance and land purchases. The firm's success depends on its bargaining positions vis-a-vis the local planning authority and in the input and final markets, resources including management, experience, decision-making abilities, market analysis, organization, goals, and attitudes toward acting under risk and uncertainty. Knowledge and suasion of public land-use planning and actions, for example, is fundamental to achieving competitive advantage over fellow developers in both the land and housing markets.

Most important of the conclusions relates to the cost to the developer of unpredictable and time-consuming public land-use planning. As reflected in the developer's expectations and planning at the time of the land purchase public actions affect his operations on several levels and at different times. His production schedules, his choice of inputs and timing of their purchase, and his planning horizon determine how much cost he incurs when he waits for planning approval. He foregoes other investment opportunities, risks not achieving rezoning, and pays for zoning lawyers and expert testimony. Uncertain delimitation of land uses, the uncertain continuation of a particular land-use planning policy and the shortage of zoned land which is ripe for development lead to extremely high land prices, the necessity of an options market, and the additional costs of risk. The developer thus faces the combined uncertainties of land-use planning and the ever-changing demands for developable land which accompany unpredictable economic growth. He suggests the comprehensive, long-term, and more credible public land-use plan as an alternative to the present, expensive approach. (CAS)

133. HABITAT, INSTITUTIONS, AND ECONOMIC DEVELOPMENT IN SASKATCHEWAN: STUDIES IN THE CULTURAL ECOLOGY OF THE GREAT PLAINS

Main Investigator: John W. Bennett.

Status of Research and Publications: In process.

Agency: Washington University (St. Louis), Department of Sociology, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Studies of social and economic adaptation to the distinctive habitat and market economy circumstances of the Great Plains, over the 70-year period of settlement in this region. Focus is on a particular region of 5,000 square miles in the southwestern section of Saskatchewan, with considerable variation in habitat features. These variations permit several economic modes: various combinations of crop and livestock production, along with pure ranching and grain farming. Ethnic variations include Anglo-Americans; eastern Europeans; Hutterian colonies; Cree Indians. The various and changing adaptations made by each of these to the habitats of the region is the principal theme of the research. Practical implications center principally in the field of the social and cultural aspects of economic development and change. (JWB)

134. AN AUTOMATED INFORMATION SYSTEM FOR REGIONAL ANALYSIS PURPOSES

Main Investigator: Melinda McCreary.

Status of Research and Publications: Research completed as of January 1, 1965.

Publications: Volume I, Source Data, Volume II, Derived Information, and Volume III, Design of the System, to be completed by June, 1965.

Agency: University of Washington (Seattle), Urban Data Center, in cooperation with the Washington State Department of Commerce and Economic Development.

Previous Digest Report: 11:2-137.

Research Problem. Demonstration of use of computer graphics for regional analysis. In addition, it reports major considerations in designing an automated system and discusses the implications of system for use in regional analysis.

Previous Relevant Research. A method for measuring growth was adapted for the present study known as the Shift technique. This technique was presented in a publication called How a Region Grows, Supplementary Paper Number 17, Committee for Economic Development, by Harvey S. Perloff and Vera W. Dodds.

Method of Study. To fulfill the demonstration requirement, a cross section of variables from several state agencies were incorporated into the system by county, year, and department. They were then tabulated and subjected to several programs of graphic display. A technique for measuring growth, the shift, or the percentage a county occupies of the total absolute change in a state over an interval of time, is applied to those variables which are considered to be growth indicators.

Major Findings. In the development of this system, certain conclusions were reached about the methods of standardizing data for automated use. These include the manner of designing data input and output so as to achieve optimum flexibility for future requirements. Conclusions are also drawn as to the criteria for writing programs to fill special use requirements. Implications for the system are considered in light of the needs of state agencies involved

in planning. Methods are suggested for using the system to devise any number of planning areas for study. Implications are also suggested for how local areas might adapt the system to their requirements. Use of a centralized information system by small areas would assist them in coordinating otherwise unrelated programs and would expand the information base for regional, county, and state agencies. (MM)

135. GEOGRAPHIC MOBILITY OF WISCONSIN WORKERS

Main Investigators: Gerald G. Somers, Archie Kleingartner, Graeme H. McKecknie, Collette Moser.

Status of Research and Publications: Completed. To be published by University of Wisconsin Press, 1965

Agency: University of Wisconsin, Industrial Relations Research Center, in cooperation with Wisconsin State Employment Service and Wisconsin Survey Research Center.

Previous Digest Report: 11:1-80.

Research Problem. Three major questions were investigated: (1) Who are the mobile workers and how do they differ from less mobile workers in age, education, training, family status and previous patterns of employment and mobility? (2) What are the attitudes of mobile workers toward work and community, and what motivates their mobility? (3) What are the gains and costs of geographic mobility--for the worker, the community, and the economy?

Method of Study. A sample of male members of the labor force who had moved into Madison or Milwaukee from outside a fifty mile radius between January, 1955 and December, 1960 was selected. Personal interviews were completed with 102 workers in Madison and 108 in Milwaukee.

Major Findings. (1) The geographically mobile workers are younger and better educated than non-mobile workers and are much more heavily represented in the professional-technical and managerial occupations. (2) The incomes of the mobile workers are higher than the incomes of non-mobile residents. (3) The mobile workers exhibit a high propensity toward movement as indicated in their past patterns of mobility and their willingness to accept change in order to get ahead in their work. (4) The move to the two communities was motivated by employment incentives--to get a job or to get a better job. (5) The major gains resulting from the move were seen by the mobile workers to be economic (better job and higher living standards), whereas the major losses were social and cultural (friends, relatives, and community relations). (6) An objective comparison of post-move and pre-move labor force status showed that relative gains were made in higher earnings and socio-economic status and reduced hours. (GGS)

136. LEGAL PROBLEMS OF HIGHWAY LAND ACQUISITION

Main Investigators: Graham Waite, Dean Massey, Richard Ratcliff, and Orrin Helstad.

Status of Research and Publications: Two year study, in process.

Agency: University of Wisconsin, School of Law and School of Commerce,
Urban Land Economics Center under sponsorship of Highway Research
Board.

Previous Digest Report: None.

Research Problem. Determination of rules regarding compensability and valuation which are in harmony with sound appraisal practice as well as with just compensation from both an equitable and legal standpoint. Rules are to be developed in guideline form which can readily be used by state legislatures. (SK)

137. INFLUENCE OF BUSINESS GROUPS AND CIVIC ORGANIZATIONS ON DEVELOPMENTAL PROGRAMS IN PHILADELPHIA'S REFORM

Main Investigator: Kirk R. Petshek.

Status of Research and Publications: In process.

Agency: University of Wisconsin (Milwaukee), Department of Urban Affairs,
under sponsorship of Committee for Economic Development, Area
Development Committee.

Previous Digest Report: None.

Research Problem. Reasons for the emergence of civic consciousness in postwar Philadelphia, and analysis and evaluation of the civic and business groups through which it expressed itself. Early planning movement and civic group involvements. Founding of the Greater Philadelphia movement, type of power-structure members included, purposes and methods of operation. Other groups contributing studies. Collaboration in the administration's policy formation. Social and economic concerns. New role of business leadership.

Method of Study. Same as above. (SK)

138. DEVELOPMENTAL PROGRAMS OF PHILADELPHIA'S RENAISSANCE

Main Investigator: Kirk R. Petshek.

Status of Research and Publications: In process.

Agency: University of Wisconsin (Milwaukee), Department of Urban Affairs.

Previous Digest Report: None.

Research Problem. Investigation of factors leading to successful development programs in postwar Philadelphia. Analysis and evaluation of historical background; role of civic-business-government cooperation through city-wide organizations and quasi-public corporations; role of coordinators and coordinating devices; decision-making within the administration; influence and role of the "new" professional--i.e., the specialist with understanding of over-all relationships; long-term influence of over-all developmental approaches.

Method of Study. Review of documents in own personal files, in city offices and City Archives. (2) Extended interviews with past colleagues, and present city officials, professionals, civically involved citizens, professional and volunteer staff of civic organizations and non-profit corporations. (3) Mail questionnaire to more than 400 members of public and private boards and commissions. (SK)

139. AN EVALUATION OF THE TOWN FORM OF GOVERNMENT IN MASSACHUSETTS, A SEVENTEENTH CENTURY INSTITUTION

Main Investigator: Joseph F. Zimmerman.

Status of Research and Publications: In process.

Agency: Worcester Polytechnic Institute, Department of Economics, Government and Business.

Previous Digest Report: None.

Research Problem. The project is designed to evaluate how well a seventeenth century institution with modifications is performing especially in urban area. The reasons why no town has become a city in Massachusetts since 1922 although forty-two towns are larger than the smallest city are being investigated. Particular emphasis is being placed upon legislative and administrative modifications of the town form of local government. The role of the finance committee as an adjunct of the town meeting and the effectiveness of the representative or limited town meeting are being evaluated. The executive secretary to the board of selectmen and the town manager also are being closely scrutinized. Finally, suggestions will be made to strengthen town government and predictions will be made concerning its future. (JFZ)

140. ZONING AND ATOMIC ENERGY

Main Investigator: Joseph F. Zimmerman.

Status of Research and Publications: Completed and published as "Zoning for Atomic Energy Uses." Zoning Digest, July, 1964. Volume 16, Number 7, pp. 161-169.

Agency: Worcester Polytechnic Institute, Department of Economics, Government and Business.

Previous Digest Report: None.

Research Problem. Development of definitive model zoning regulations for atomic energy uses.

Major Findings. Many of the common uses of ionizing radiation appear to require no special zoning treatment, either because they cause few risks or because the risks are adequately controlled by federal and/or state regulations. Routine medical uses fall in this category as do the industrial use of radioisotopes in areas zoned for industry. Major nuclear facilities--such as power reactors, fuel elements fabricating plants, fuel reprocessing plants, and waste storage or disposal areas--appear more likely to require special zoning treatment. The policy of excluding reactors from heavily populated areas is beginning to give way to a policy of containment; design of major nuclear facilities will be relied upon to prevent the accidental release of fission products. Special permit requirements for major nuclear facilities represent a middle ground between the extremes of permitting or prohibiting these facilities outright. These requirements place upon the applicant the burden of proving that his proposed facility will not adversely affect the public. Furthermore, such a procedure allows the local government to examine the proposal and to secure the expert advice of the AEC, the U.S. Public Health Service, state and local health officials, and other qualified advisors. Until more experience with nuclear hazards is gained, the special permit requirements may be the most satisfactory approach for zoning ordinances to take. Responsibility administered, these requirements protect the public without unnecessarily hampering nuclear development and thus depriving the public of its many benefits. (JFZ)

CANADA

141. PUBLIC FINANCE ASPECTS OF HEALTH SERVICES IN CANADA

Main Investigator: Eric J. Hanson.

Status of Research and Publications: Completed June, 1964. To be published as monograph of about 220 pages by Queen's Printer, Ottawa, in near future.

Agency: University of Alberta, Department of Economics, under sponsorship of Royal Commission on Health Services, Government of Canada, Ottawa.

Previous Digest Report: None.

Research Problem. This study examines health services within the Canadian public sector. The problems are the projection of expenditures on health services until 1991, and the indication of potential sources of revenue.

Previous Relevant Research. Eric J. Hanson, Fiscal Needs of the Canadian Provinces, Canadian Tax Foundation, Toronto, 1961. Other economists made projections of the potential growth of the Canadian economy and of total expenditures on health services to 1991.

Hypotheses. The Canadian economy is expected to grow substantially in the future; and to become even more urbanized than in the past. There will be an increasing demand for many specialized health services, and rising incomes should be sufficient to pay for more services. It is likely that there will be a national government health care scheme with very comprehensive coverage in the future. This is a matter of timing. In the industrialized, urbanized, specialized, and interdependent society of today, health care is going to be financed increasingly by governments.

Method of Study. First, trends in all expenditures and revenues of all the levels of government are set out for the period 1946-1963. The roles of the federal, provincial, and municipal governments in providing and financing health services are described in detail. Second, the expenditures of all levels of government on all functions are projected to 1991, and sources of revenue are indicated. Government expenditures on health services are projected and fitted into the whole governmental expenditure framework and related to the growth of the Canadian economy. Third, the potential sources of revenue for all governments are discussed, and suggestions are made for the financing of health services in the future, with projections to 1991. The allocation of health services among the three levels of government is examined, and the magnitude of potential intergovernmental transfers for the financing of health services indicated. Transfer techniques are discussed, and proposals for changes in the federal health grants structure are made.

Major Findings. In general, the implications are that the Canadian provinces (together with the municipalities) would administer and spend more

than nine-tenths of the total annual government expenditure on health services. The federal government, however, through grants to the other governments, would provide about half of the required public funds for health services. Eventually governments will provide nearly all health services in Canada, including public health, medical and health care, hospitalization, and sanitation. (EJH)

142. PROJECTIONS OF PROVINCIAL-MUNICIPAL EXPENDITURE REQUIREMENTS IN CANADA

Main Investigator: Eric J. Hanson.

Status of Research and Publications: In process.

Agency: University of Alberta, Department of Economics, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: 11:2-141.

Research Problem. Projection of all government expenditure requirements to 1976, with special emphasis upon the provincial-municipal sector and upon provincial breakdowns.

Previous Relevant Research. The study grew out of the project outlined above (health services study). It was felt that there was a need to study the provincial-municipal budgets in much more detail.

Hypotheses. The provincial-municipal sector has grown much more rapidly than the gross national product and the federal government sector during the past decade. It is entirely likely that the upward trend will continue to be very strong in the next decade. There will also be differences in rates of expenditure growth among the ten provinces.

Method of Study. First, estimates of population and gross national product have been made for Canada. Projections of the population and personal income of the ten provinces are also provided. Second, estimates are made of the potential revenues and expenditures of the federal government within the framework of the national accounts and the federal budget. Third, projections are made of the expenditure requirements of the provincial governments and municipalities in the ten provinces.

Major Findings. Firm conclusions cannot be set out at this stage, but the data point to substantial expansion of the provincial-municipal sector in Canada, and a relative decline of the federal. Expenditures on education, health services, and urban transportation systems can be expected to increase rapidly in the next decade. (EJH)

143. AN ECONOMIC EVALUATION OF HUNTING AS A RECREATION RESOURCE IN THE EAST KOOTENAY AREA OF BRITISH COLUMBIA

Main Investigator: P. H. Pearse.

Status of Research and Publications: In process. Completion expected autumn, 1965.

Agency: University of British Columbia, Department of Economics, in cooperation with Fish and Game Branch, Department of Recreation and Conservation of British Columbia, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Case study to develop and test a methodology for evaluating a particular kind of recreation resource. The East Kootenay area of British Columbia was chosen as a particularly favourable environment for such an investigation. It is expected that this study will form a part of a larger program of studies aimed at investigating rural land use conflicts, and developing a methodological framework for evaluating various combinations of land uses.

Previous Relevant Research. Particularly relevant previous work in this area include the following: Brown, William G. et al., "An Economic Evaluation of the Oregon Salmon and Steelhead Sport Fishery" (mimeographed report to the Oregon State Game Commission, undated). Castle, Emery N., "Criteria and Planning for Optimum Use," in Land and Water Use (Wynne Thorne, ed.). Publication No. 75 of the American Association for the Advancement of Science, Washington, 1963, pp. 285-302. Clawson, Marion, "Methods of Measuring the Demand for Outdoor Recreation," Reprint No. 10, Resources for the Future, Inc., Washington, 1959. Clawson, Marion, "Recreation as a Competitive Segment of Multiple Use," in Land and Water Use (Ibid.), pp. 169-184. Clawson, Marion and R. Burnell Held, "Demand for Rural Resources in the Context of Long-Range National Needs," Resources for the Future, Inc., Reprint No. 44, 1963. Clawson, Marion and Burnell Held, The Federal Lands: Their Use and Management, Johns Hopkins Press, Baltimore, 1957. Clawson, Marion and Jack L. Knetsch, "Outdoor Recreation Research," Resources for the Future, Inc., Reprint No. 43, 1963. Gardner, B. Delworth, "Agriculture as a Competitive Segment of Multiple Use," in Land and Water Use (Ibid.), pp. 99-114. Knetsch, Jack L., "Outdoor Recreation Demands and Benefits," Land Economics, Vol. XXXIX, No. 4, November, 1964, pp. 387-396. Spargo, R. A., "Evaluation of Sport Fisheries: An Experiment in Methods," (Mimeographed report of the Economics Service of the Department of Fisheries), Ottawa, 1964. Trice, Andrew H., and Samuel E. Wood, "Measurement of Recreational Benefits," Land Economics, Vol. XXXIV, No. 3, August, 1958, pp. 196-207. See also comments on this work by Lawrence G. Hines and Jack Lessinger, Ibid., November, 1958.

Hypotheses. The hypothesis on which the analysis is based is that a reliable demand curve for recreation, which is not rationed by the market, can be empirically derived by observing the willingness of recreationists to incur costs to reach the site of the recreation. The "consumer surplus" accruing to those within a given bracket of cost per recreation day can be estimated with reference to the relative intensity of participation by groups with higher costs per recreation day. (This follows closely the hypotheses suggested by Clawson and Knetsch in the references above.) The demand curve for the recreation thus derived will enable an evaluation of the recreation resources.

Method of Study. On its 1964 annual random sample of the hunters of British Columbia (which is aimed at estimating the big game harvest) the Fish and Game Branch asked each respondent whether he hunted in the East Kootenay. Those who answer in the affirmative, coupled with a sample of non-respondents, will constitute the population to be sampled for the recreation evaluation study. East Kootenay hunters will then be asked to provide information relating to their hunts, which will be compiled to derive a demand schedule for East Kootenay hunting. (FHP)

144. URBAN TRAVEL: MODE AND ROUTE CHOICES

Main Investigator: Robert W. Smith.

Status of Research and Publications: In process. Completion expected November, 1965.

Agency: Damas and Smith Limited, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: 11:2-158.

Research Problem. Urban street and transit design is largely based on assumptions that travellers want to minimize the time, distance and cost of their trips. Actual behaviour suggests that other factors also operate, and this study of a number of cities seeks to identify those other factors.

Method of Study. A home interview survey has been made in Metropolitan Toronto, Metropolitan Winnipeg, Calgary, Burlington, Galt and Preston. Respondents have rated habitual and alternative modes or route choices for the daily first work trip. In addition, respondents have expressed their attitude to features of the design and operation of the street systems.

Objective data, describing the available transportation systems in engineering design terms, is now being collected. (RWS)

145. INTERNATIONAL INQUIRY ON CONSTITUTION, ORGANIZATION AND ADMINISTRATION OF CITIES

Main Investigator: Julian G. Suski.

Status of Research and Publications: In process. Preliminary report on a portion of the project to be published June, 1965, in Canadian Public Administration. Brochures on several cities in draft form.

Agency: Personal research, under sponsorship of Canadian Federation of Mayors and Municipalities, Canadian Council on Urban and Regional Research, and City of Edmonton.

Previous Digest Report: 11:2-147.

Research Problem. Comparative study of organization and administration of large cities (200,000 to 700,000 population) in different countries of the world, with special reference to revision of Canadian municipal legislation.

Previous Relevant Research. Samuel Humes and Eileen M. Martin, Structure of Local Government Through the World. International Union of Local Authorities. (The Hague) (Deals with principles of local government and its structure in particular countries, but does not cover administrative practice in particular cities.)

Method of Study. Questionnaire to more than 100 selected cities. Field work in Europe in six cities with different systems of government. (JGS)

146. POLICY MAKING IN MONTREAL

Main Investigator: Guy Bourassa.

Status of Research and Publications: In process. Preliminary findings published in Canadian Journal of Economics and Political Science, February, 1965.

Agency: University of Montreal, Department of Political Science.

Previous Digest Report: 11:2-154.

Research Problem. Research currently has three parts, (1) analysis of political elites; (2) decision making in education; and (3) ethnic relations in Montreal municipal government. General problem, who governs in Montreal? Is it the same elite in different fields? How have French and English groups solved the problem of cooperating at the municipal level? What has been the role of the Church? What will be the future political structure of metropolitan Montreal?

Hypotheses. The political life of Montreal has changed from an oligarchy to a democracy. The French group has been one of the important factors in this evolution and this group is now establishing a political system of his own. The political life of Montreal is an image of the political problems in the whole Province of Quebec.

Method of Study. Content analysis of archives. Questionnaire and interviews for the analysis of particular decisions and of the attitudes and opinions of ethnic groups on municipal government.

Major Findings. (First part of the program.) Political leaders in Montreal are now part of a new class, absolutely different from the leaders of the XIX Century. The evolution of Montreal is linked very narrowly to the situation of French Canadian nationalism. (GB)

147. / LAND SPECULATION

Main Investigator: R. W. G. Bryant.

Status of Research and Publications: Mimeographed report completed December, 1964. Short version to appear in "Plan" (T.P.I.C.).

Agency: Universite de Montreal, Centre de Recherches Urbaines et Régionales, Institut d'Urbanisme.

Previous Digest Report: None.

Research Problem. How to obviate speculation in land round the location of the major steelworks to be built between Montreal and Quebec. In view of the land problem on the urban fringe of Greater Montreal, it seemed best to deal with the matter in a broader context.

Major Findings. (1) Increments of land value due to particular investments in the public sector, or the general growth of the community, ought properly to belong to the community. (2) Any attempt to separate this increment from the value for existing use is bound to be cumbrous, as was demonstrated by the British experiment following on the recommendations of the Uthwatt Committee of 1942. (3) Taxation of site values, as opposed to improvements, has but limited application in preventing speculation. (4) Therefore, large-scale public ownership urban fringe land is suggested, as is already commonplace in Europe. (RWGB)

148. CONTROL OF LAND USE: COMPARATIVE LEGISLATION AND PRACTICE ABROAD

Main Investigator: R. W. G. Bryant.

Status of Research and Publications: In process. Mimeographed reports completed on Norway, Sweden, and Finland. Work in hand on Denmark. Material being collected from Eire, South Africa, Australia, New Zealand.

Agency: Universite de Montreal, Centre de Recherches Urbaines et Régionales, Institut d'Urbanisme.

Previous Digest Report: None.

Research Problem. A series of "country" papers, to be used ultimately as the basis for a comparative study of how different democracies organise the control of land use and their regional development. (RWGB)

149. COST AND DENSITIES

Main Investigator: R. W. G. Bryant, and J.-P. Guay.

Status of Research and Publications: In process.

Agency: Université de Montreal, Centre de Recherches Urbaines et Régionales, Institut d'Urbanisme.

Previous Digest Report: None.

Research Problem. Comparative costs, both individual and social, involved in residential development of different kinds, and different densities, e.g. "normal" suburban, cluster, highrise, etc.

Method of Study. (1) Assembly of information already produced, as a yardstick. (2) Investigation in depth, with information from suburban municipalities and developers. (RWGB)

150. SATELLITE TOWNS IN THE GREATER MONTREAL AREA

Main Investigators: Jean Alaurant, P.-Y. Pepin, and R. W. G. Bryant.

Status of Research and Publications: In process.

Agency: Université de Montreal, Institut d'Urbanisme.

Previous Digest Report: None.

Research Problem. The problem is that Montreal is spreading like a pool of oil, subject to the usual factors of accessibility, ownership of land, and so on. It is felt that this peripheral sprawl should be contained. Montreal is already surrounded by a ring of small towns at a 25-40 mile radius. These towns are old local centers, and a number of them have industries, some both important and long-standing, that are part of the Greater Montreal complex. Therefore, to suggest a deliberate transfer to them of some of the Montreal growth does no violence to logic, and transportation investment can be used to stimulate such decentralization.

Method of Study. We have selected 6 towns for study in depth, with a view to determining their potentialities: St-Jean-Iberville, Ste-Hyacinthe, Sorel-Tracy, Joliette, St-Jérôme, and Valleyfield. (RWGB)

151. REGIONAL OUTDOOR RECREATION

Main Investigator: E. Mattyasovszky.

Status of Research and Publications: In process.

Agency: University of Toronto, Division of Town and Regional Planning, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: 11:2-159.

Research Problem. To establish physical and ecological criteria for outdoor recreation area selection and maintenance. Purpose of this research

is to examine the problem of such criteria and to suggest solutions. Aspects the research intends to cover include (1) delineation of potential recreation areas; (2) how to establish and maintain a so-called "partial ecological balance"; (3) adjustment of recreation areas to the land uses of the adjacent areas; (4) positive steps such as erosion control, flood control, preservation of vegetational covering, etc., to prevent degradation of an area; (5) density of the various uses to be permitted; (6) multiple-uses--compatibility of different uses; (7) specific ecological questions connected with water; (8) establishment of certain guiding policies for the application of the research results; and (9) methods of boundary delineation.

Method of Study. Use of a 50 mile radius belt around Toronto as an experimental research area. (EM)

152. AREA DEVELOPMENT PROJECT

Main Investigation: Audrey Sealand.

Status of Research and Publications: Three year demonstration-research project, in process.

Agency: Community Chest and Councils of the Greater Vancouver Area, in cooperation with several public and private agencies, and under sponsorship of Provincial Government, Federal Government, foundations and other sources. Main office at 6445 Knight Road, Vancouver 15, Canada.

Previous Digest Report: 11:2-161.

Research Problem. To demonstrate an integrated effort to rehabilitate multi-problem families and to study changes required to integrate a wide variety of services under one administration. The families of concern to this project have children in "clear and present danger," that is, their physical and emotional welfare is being threatened to the extent that the community has a direct responsibility to them. These families have used a disproportionate amount of health and welfare services in the past but, generally, have not become rehabilitated as a result of present agency services.

Method of Study. This project aims to provide under one administration an integrated program of health, welfare and recreation services for a selected group of multi-problem families in one area of the city. It is planned that five social workers, assigned from the Family and Children's Court, City Social Service Department, Children's Aid Society, Catholic Children's Aid Society and Family Service Agency, will give service to an experimental group of 100 multi-problem families in the South Vancouver area. The Metropolitan Board of Health will provide a part-time nursing supervisor. Innovations in treatment are proposed in three major areas: 1) There will be one social worker to a family unit carrying out as many social work functions required by the family as is legally possible; 2) Other disciplines, such as health and education, will be coordinated to the greatest extent possible in the service to the families; 3) A community worker will operate within a neighborhood where a number of these families live. The purpose of this work will be to encourage the active interest

and involvement of those living in the neighborhood in determining their own needs, and to assist them in devising programs to improve neighborhood and family life.

The research design includes the experimental group of 100 families, a control group of 100 families in the same area, and a control group of 100 families in another part of the city. Families who evidence failure in the child rearing function and who have had a multiplicity of problems over a period of time will be selected. It is proposed that research be done in four areas: 1) measurement of change in families as a result of treatment; 2) study of the methods of treatment used; 3) study of the administrative and organizational processes involved with a view toward implementation of project approaches into the social service structure of the community; and 4) research into causation of problem families. (BA)

153. GOVERNMENT AND PUBLIC FINANCE FOR THE DEVELOPING NIAGARA REGION

Main Investigator: Henry Mayo.

Status of Research and Publications: Preliminary report, Local Government Units of Lincoln and Welland Counties, published October, 1964, by Niagara Peninsula Municipal Committee on Urban and Regional Research, Grimsby, Ontario. 28 pp., plus appendices.

Agency: University of Western Ontario, Middlesex College, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: 11:2-155. (HM)



OTHER COUNTRIES

154. THE PHILIPPINES IN A RESURGENT ASIA

Main Investigator: Hernando J. Abaya.

Status of Research and Publications: In process. Progress report in U.P. Research Digest, 4(1):22.

Agency: University of the Philippines, College of Arts and Sciences, under sponsorship of Social Science Research Council.

Previous Digest Report: None.

Research Problem. To trace development of nationalism in the Philippines, laying emphasis on its upsurge from the Propaganda Movement to the present. In a larger sense, it will analyze the forces, the influences and the factors that have propelled development of the Philippines as a free nation, and have helped shape its policies in its bid for survival in a world of conflict. Likewise, it examines America's position in Asia and weighs the prospects for Philippine democracy in the crucial years of challenge ahead."

Method of Study. Comprehensive and critical study of the men who figured in the Propaganda Movement, and re-reading of their more important works, e.g., Rizal's Noli Me Tangere and El Filibusterismo, Andres Bonifacio's the Katipunan and the Revolution, the works of del Pilar, Jacinto, Mabini, Lopez Jaena, and others. Analysis of the continuous growth of nationalism during America's "experiment in democracy" through the Macapagal administration. From these, the researcher not only reappraises America's position in Asia but he also looks ahead; especially when he notes: "For the Philippines, keeping in step with the social revolution that is sweeping Asia, is a continuing battle to abolish poverty and ignorance by satisfying the hunger for land and for a just share of the blessings of nature, among the greater of its toiling population, and by seeking to place the good life within the reach of the less privileged so that they too may walk in freedom and dignity." (LKA)

155. STUDIES ON PHILIPPINE ISLAM

Main Investigator: Cesar Adib Majul.

Status of Research and Publications: In process.

Agency: University of the Philippines, University College, under sponsorship of Social Science Research Council.

Previous Digest Report: None.

Research Problem. There has not been an intensive work on the Islamic Institutions of the Philippines. Works authored by Najeeb Saleeby, D. Toylo and E. Hassell, though authoritative enough in their own right, are nevertheless

delimited in scope in the sense that they concentrated mainly on the historical aspect of the subject. In addition to presenting the history of Islam in the Philippines, this work also aims at an interpretation of this history.

Method of Study. Through a close study of the agama court system, the adat law (Luwaran, etc.), their religious attitudes, activities, rites, oral and written traditions and the genealogies of their leaders and a study of their educational system especially Koranic instruction, the researcher hopes to accomplish the following: (1) a description in exact historical terms of the introduction of Islam in Sulu and other parts of the Philippines during the Pre-Spanish period, the principal personalities, the cultural and geographical factors involved; (2) an interpretation of the three hundred-year conflict between the Spaniards and the Muslims of Sulu and other parts of the Philippines through a definite perspective, more particularly, through jurisprudential and institutional concepts of Islam; and (3) an analysis of the scope and extent of the spread of permeation of Islam in the lives and institutions of present day Filipino Muslims. The determination of how much of their institutions at present reveal a pre-islamic orientation and differ from or adhere to the classical Koranic sanctions and injunctions will result from this. (LKA)

156. ECONOMIC GEOGRAPHY OF THE WORLD IRON AND STEEL INDUSTRY

Main Investigator: Gerald Manners.

Status of Research and Publications: In process. Completion expected 1967.

Agency: University of Wales, University College of Swansea, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Description and analysis of the changing geography of iron and steel manufacture and iron ore production, together with their associated product and raw material flows, for the period 1950-1965. The analysis will expose the principal factors which have influenced the spatial shifts in these two industries, in particular the rapid changes in the size, location and nature of their markets, the role of new transport facilities and costs, and the effect of an expanded raw material base. It will also examine the impact of new technology, of changing pricing policies and of the growing political influences upon the location of the industries. And in the light of these findings, the direction of future geographical changes in the industries will be assessed. (GM)

BRIEF MENTION

NEW URBAN AND REGIONAL RESEARCH AND TRAINING PROGRAMS

Work Program, Regional Economics Division, Office of Business Economics, U. S. Department of Commerce

The Regional Economics Division of the Office of Business Economics, U. S. Department of Commerce was established in March, 1964, to consolidate basic regional economic research then being carried out in various places in the Department. Chief of the Division is Robert E. Graham, Jr. Purpose of the Division, according to the directive establishing it, is (1) to develop and maintain statistical measures reflecting the current economic situation in the various regions of the nation and providing a means for tracing the economic experience of each region; and (2) to measure and analyze factors responsible for regional differences in levels of economic activity and regional variations in rates of growth.

A number of projects are underway, and others are under active consideration, in order to carry out this directive. Readers of the Digest will be particularly interested in this program, since it appears that the Division will increasingly become a basic source of information for persons and groups involved in regional, state or local analysis. Projects underway or under active consideration are listed below under two headings: those at the state or regional level; and those involving smaller areas.

State or regional projects.

Expansion of State Personal Income Series. Principal work in this direction is taking place or contemplated along four lines, as follows: (1) Disposable income in constant dollars. Deflated estimates for 1929 and 1946-63 were published in the April, 1965 issue of the Survey of Current Business. (2) Quarterly income estimates. Preparation of seasonally adjusted quarterly income estimates for the period 1953-1963 is now underway. Once this work is completed, it is expected to form the base for regular publication of corresponding current estimates, with about a four month lag. (3) Personal consumption and savings. Not yet undertaken, this step is under active consideration as an initial move toward developing a conceptual framework for a set of regional economic accounts which could be implemented statistically. (4) Income produced. As a further step in the direction of a meaningful set of regional accounts, two projects are underway which have as their objective the measurement of income produced on a state basis.

Regional Projections. At the request of the Federal Ad Hoc Water Resources Council, work is underway on measuring and analyzing the economic base and making projections for each of 16 major areas into which the nation has been divided for purposes of water resources development. The projections will cover a fifty year period, and will include income, employment, population and households. Area projections will be made by at least two, and perhaps three, separate and independent approaches, with each tied together by the constraint of an over-all

national framework of projected parameters such as population, productivity, employment, inter-industry sales and purchases relationships, and an income and product account. They will also depend heavily on the work being done in smaller areas, described below.

Smaller area projects.

(1) Employment patterns. Directed at identifying and measuring factors underlying shifts in employment patterns in significant geographical areas throughout the country, this project is based on a comparative analysis of employment data provided by the Census Bureau for 1940, 1950 and 1960. For states, regions, and about 100 SMSA's, the data are for 118 industries. For each of the nation's 3,102 counties, the data are for 32 industries. Results of the analysis are now being prepared for publication as a nine-volume series. The first eight will contain analyses for each county in the various regions. The ninth will be a United States summary. A generally uniform text will give an explanation of the concept and method.

(2) Personal Income Estimates. Personal income estimates are being prepared for two kinds of smaller geographical areas, namely, metropolitan areas and other multi-county areas. With respect to the former, estimates are underway for all SMSA's for the years 1929, 1940, 1950, 1959, and 1961. Once established, it is hoped that the metropolitan area series can be maintained on an annual basis, with consideration given to the eventual preparation of quarterly estimates. The other multi-county estimates are being prepared primarily for purposes of the regional projections mentioned above. They will cover the years 1962, 1959, 1950, 1940 and 1929. While the county will be used as a basic building block to the extent possible, no attempt will be made to build county series because of the well known situs problems, as well as problems of statistical reliability. Whether any future attempts will be made to keep the non-metropolitan multi-county area income estimates up on a current basis has not been decided.

(3) Data Banks. As time and resources permit, the Division expects to build a bank of local area economic data designed specifically for use in regional economic research. The bank will be characterized by rapid access, quick retrieval, and a high degree of flexibility with regard to geographic classification. The employment figures and the income estimates mentioned above will form the initial principal components of the bank. Additional information will be added as it is generated in the program. (SK)

Boston Regional Planning Project

Established in 1962, the Boston Regional Planning Project is preparing a comprehensive development plan and specialized transportation proposals for the Eastern Massachusetts Region--a 2300 square mile area that comprises 152 cities and towns and contains 3.4 million people. The Project operates under joint sponsorship by the Massachusetts Departments of Public Works and of

Commerce and Development, with BPR and URA funds, and in close cooperation with the (Boston) Metropolitan Area Planning Council, the Massachusetts Bay Transportation Authority and individual local communities. \$4.8 million have been allocated to the operation, which involves a staff of 40-50 persons and several outside consulting firms.

A lack of needed planning methods and data have led to some significant research and development efforts on the part of the Planning Project. These efforts are being undertaken to produce--statistical models for predicting the intra-regional distribution of population, employment, etc. (with Traffic Research Corporation); --improved techniques for predicting intra-regional trip generation and model split patterns (with Alan M. Voorhees and Associates); --a quantitative method for anticipating the local fiscal consequences of alternative regional development policies; --summary indices expressing costs and benefits implied by alternative regional development policies; and --detailed and comprehensive employment data for 626 traffic zones making up the Eastern Massachusetts Region--for 1950, 1960 and 1963.

As the results of this work become available, they will be presented in the form of technical reports. (The Planning Project's initial locational forecasting studies are described in a paper by Donald M. Hill, Daniel Brand and Willard B. Hansen, "Prototype Development of a Statistical Land Use Prediction Model for the Greater Boston Region," presented at the 44th Annual Meeting of the Highway Research Board in January, 1965.)

For further information contact Donald M. Graham, Director, Boston Regional Planning Project, 11 Ashburton Place, Boston, Massachusetts 02108. (WBH)

Expanded Research Program, International City Managers' Association

The Expanded Research Program of the ICMA has as its basic goal contributing to the flow of information in urban management problems and contributing to professional growth. Grants for research are considered in all aspects relating to urban patterns. Well-conceived studies which assess the effectiveness of major new urban programs and will benefit practitioners are especially welcome. In conjunction with the expanded program, the Association was recently seeking a researcher to do a monograph on "The Economics of the Small City." The purpose of this study would be: (a) To describe the economic characteristics of communities of less than 10,000 in non-metropolitan areas; (b) to discuss their economic problems and opportunities; and (c) to identify a series of alternative policies which should be considered before any economic development program is undertaken.

Further information about the program can be obtained from International City Managers' Association, 1313 East 60th Street, Chicago, Illinois. (WWS)

Urban Observatory, University of California (Los Angeles)

Operating within the framework of the Institute of Government and Public Affairs at the University of California in Los Angeles is a new research

center known as the Urban Observatory. Purpose of the Observatory, according to materials supplied to the Digest, is to provide a center for conducting research on social, economic, governmental and political problems in urban areas, and to undertake specific research projects based on a representative panel of households in the Los Angeles area, with plans for interviewing these households in depth over a period of years. Selection of the panels and field work will be done under the auspices of UCLA's Survey Research Center, while the various studies will be designed, supervised and analyzed by an interdisciplinary team of the University's social scientists. The first studies to be undertaken, dealing with family relationships under different settings, are described elsewhere in this issue. (See above, Items 29, 30, and 31.) The panel of families will also be available for analysis by other researchers who would like to test specific hypotheses using data which has already been collected. (SK)

Peace-Oriented Studies, Department of Regional Science, University of Pennsylvania

For some time several members of the faculty of the Department of Regional Science have been interested in the implications of their theoretical, conceptual and empirical research for problems falling under the heading of international order, arms control, disarmament, and peace research. Among others, topics investigated include: (1) local and regional impacts of disarmament; (2) political and economic organization of a system of world regions; (3) spatial structure of decision making and political authority; (4) regional economic development; (5) implications of game theory for international deliberations and functional organization of world government; (6) diffusions of ideas and changes of attitudes over space; (7) world pattern (geographical distribution) of resources and implications for international stability; (8) general theory of social, political and economic structure and international equilibrium; and (9) interregional input-output and programming models for the analysis of spread effects.

In view of the Department's research activities and interests, opportunities for study and research in this department may interest those about to begin graduate study and those currently conducting graduate or post-doctoral work.

Interested students should write directly to: Walter Isard, Chairman, Regional Science Department, University of Pennsylvania, Philadelphia, Pennsylvania.

New Master's Program at the University of Tennessee

In the fall of 1965 the University of Tennessee will enroll its first graduate students in a two-year curriculum leading to the degree of Master of Science in Planning. First year students in both regional and urban planning will take courses in planning theory, research methods, design, and legislation, as well as a course sequence in state and local government, and an option between economics of resources or principles of economic development. During the second year there will be common courses for both concentrations in transportation and utilities planning, and in state and local finance. For more information write, Walter L. Shouse, Director, Graduate School of Planning, the University of Tennessee, Knoxville 37916.

International Seminar on Ekistics ⁽¹⁾

The Athens Center of Ekistics will hold its first annual International Seminar on Ekistics and the Future of Human Settlements, July 20-24, in Athens, Greece. The major theme is "Human Settlements: The Ekistic View." Sub-themes include: Man and His Settlements, The Century Ahead, and the Human Community.

Participants in the seminar, which will be conducted in English, will be members of the graduate school of Ekistics and visiting international experts including Buckminster Fuller, S. Giedion, Lester B. Granger, Edward T. Hall, Sir R. Matthew, Harvey S. Perloff, A. J. Toynbee, C. H. Waddington, Barbara Ward, and others. Information and application forms may be obtained from Dr. D. Iatridis, Director, International Seminar on Ekistics, Athens Center of Ekistics, 24, Strat Syndesmou Street, Athens 136, Greece.

Summer Institute in Planning, University of Arkansas and Georgia Institute of Technology

The Universities of Arkansas and Georgia Tech are co-sponsoring a Summer Institute in Urban Planning, to be held on July 12-23 at Georgia Tech in Atlanta, Georgia.

A second Institute, sponsored by Arkansas and Georgia Tech in conjunction with the University of Oklahoma will be held in Norman, Oklahoma on June 28-July 4.

Information on both Institutes is available from Professor Howard K. Menhinick, School of Architecture, Georgia Institute of Technology, Atlanta, Georgia 30332.

Summer Program in Planning at Massachusetts Institute of Technology ⁽²⁾

The Massachusetts Institute of Technology will hold the twenty-seventh in its series of annual two-week special summer programs in city and regional planning, June 21-July 2. Special emphasis this year will be on relationships of city planning and urban development programs to social problems and policies. A series of seminars during the second week will discuss governmental programs dealing with urban poverty and manpower retraining, relocation of displaced families, discrimination in housing, and the coordination of city planning programs with social welfare programs.

The material is oriented toward those who lack formal professional training in comprehensive planning. Tuition is \$300. Write: Director of the Summer Session, Room E19-356 MIT, Cambridge, Massachusetts.

(1) From ASPO Newsletter.

(2) From ASPO Newsletter.

Conference on Urban Transportation Analysis, Northwestern University

A conference on Urban Transportation Analysis will be held at Northwestern University from August 15 through August 28, 1965. The Department of Civil Engineering, Technological Institute, will be host for the conference, which will be held in cooperation with the Department of Geography and the Transportation Center. Current work in urban transportation analysis will be reviewed. Stress will be on uses of modern theories of transportation system development and modern analysis techniques, including use of computers for traffic assignment and simulation of urban growth and development. Further information may be obtained from W. L. Garrison, Department of Civil Engineering, Northwestern University, Evanston, Illinois 60201.

Short Course in Urban and Regional Information Systems, University of California (Los Angeles)

A two-week intensive course in urban and regional information systems for public policy, planning and operations in the United States will be held at the University of California (Los Angeles) August 16-27, 1965. Sponsored by the Institute of Government and Public Affairs, the Institute of Library Research, and by Physical Sciences Extension and Engineering Extension, the course is intended for city, regional, state and national public policy makers who are concerned with data banks--their establishment and their operation. Resident staff and guest lecturers will discuss the uses and the significant technical, administrative and social problems connected with such systems. Further information about the course can be obtained from H. L. Tallman, Physical Sciences Extension, Room 6532 Engineering Building, University of California, Los Angeles 90024.

Western Resources Conference, Colorado State University

Water resources research will be the theme of the 1965 Western Resources Conference to be held July 6, 7 and 8 at Colorado State University, Fort Collins. Sponsored by the University of Colorado, Colorado School of Mines and Resources for the Future, Inc. as well as Colorado State, the conference will be featured by several seminars running concurrently, dealing with a wide variety of theoretical and applied aspects of water resources management. Further information can be obtained from the Office of Conference Services, 204 Administration Building, Colorado State University, Fort Collins, Colorado 80521.

Institute on Urban and Regional Analysis, Michigan State University and University of Michigan

This two-week Institute, to be held July 11-24, 1965, is designed to provide urban and regional researchers and planners with an introduction to some of the more significant new concepts, models, and techniques for the analysis of cities, metropolitan areas, and regions. The first week's sessions at Michigan State University will concentrate on both the theoretical background and practical applications of operational gaming, urban simulation, systems analysis, spatial analysis, and computer mapping.

In the second week at the University of Michigan, Edgar Horwood and William Clark of the University of Washington will conduct an adaptation of their course on information systems and computer operations, which has previously been presented at several universities across the country. They will cover both the theoretical background and practical applications of information systems, network scheduling, data compatability, and other computer operations, programs, displays, and techniques.

The Institute is sponsored by the School of Urban Planning; Institute for Community Development, Michigan State University; Department of Conservation, Institute of Science and Technology, at the University of Michigan.

Conference on State and Local EDP Systems. New York University

The Second National Conference on Electronic Data Processing Systems for State and Local Governments will be held at New York University October 27-29, 1965, under the sponsorship of the Graduate School of Public Administration and the Division of General Education, in cooperation with the System Development Corporation. A Review Committee is currently assembling papers for the conference with emphasis on areas of mutual concern to those concerned with governmental data processing management. Chairman of the Review Committee is Professor Herman G. Berkman. Further information can be obtained from Professor Berkman at the Graduate School of Public Administration, Four Washington Square North, New York, New York.

BIBLIOGRAPHIES AND RELATED SERVICES

Migration and Population Distribution

Distance and Human Interaction: A Review and Bibliography. Olsson, Gunnar. Regional Science Research Institute, G.P.O. Box 8776, Philadelphia, Pennsylvania 19101, viii, 112 pp. \$3.00.

An extended review of both theoretical and empirical studies of interaction over distance. The emphasis is on population distribution and interaction including communication, information diffusion, and migration. The review brings together the extensive American literature on the gravity and potential models of macrogeography and the recent Swedish developments in migration and diffusion models. In addition, the relationship of these models to classical economic location theory and central place studies is explored. The bibliography contains 372 items.

Los Angeles

Urban Planning Research Digest. Research Section, Los Angeles City Planning Department. Semi-annual. First issue, September, 1964. Second issue scheduled for April, 1965. Available from Los Angeles Municipal Reference Library, Room 803, City Hall. Provides a ready reference to research projects currently in process, planned for the near future, or completed within

The past two years, produced in and concerning the Los Angeles area. Lists research concerning physical, social and economic factors related to urban planning.

New Communities

New Communities: A Selected Annotated Reading List. Library, Housing and Home Finance Agency. 24 pp. Single copies available without charge from Office of the Administrator, Housing and Home Finance Agency, Washington, D.C. 20410. Contains 292 selected titles. While it emphasizes community planning in the United States, it also covers significant foreign experiences and ideas in this field. Most of the materials were written since 1950, but a few older important studies in the field of new communities are included. Also contains an index of secondary authors and a geographic index.

Open Space

Open-Space Land, Planning, and Taxation: A Selected Bibliography. John E. Rickert, Department of Geography, University of Pittsburgh, with the collaboration of Jerome P. Pickard, Research Director, Urban Land Institute. U. S. Government Printing Office, Washington, D.C. 20402. 58 pp. 40¢ First part of a major study of State and local taxation and open-space land, to be completed during the coming year by the Urban Land Institute, under contract for the Urban Renewal Administration. An annotated bibliography and review of the literature, it includes a selection of 300 items on open-space land, planning, and taxation, with other relevant material on such topics as land planning, recreation, agriculture, and land economics. A special section lists items relating to the National Capital Region, the geographic area of the larger study.

Visual Aids

Films, Filmstrips and Slides on Housing and Community Development. Library, Housing and Home Finance Agency. Single copies available without charge from Office of the Administrator, Housing and Home Finance Agency, Washington, D.C. 20410. Lists 20 separate subject categories in the field of housing and community development, ranging from architecture through water supply. One hundred six films, filmstrips and slide shows, together with a brief summary of each, are listed, together with information covering distributor, and rental or sales price.

Urban Structure and Retail Location

Central Place Studies - A Bibliography of Theory and Applications. Brian J. L. Berry and Allen Pred, including Supplement through 1964, H. G. Barnum, R. Kasperson and S. Kiuchi. Regional Science Research Institute, G.P.O. Box 8776, Philadelphia, Pennsylvania 19101. 214 pp. \$3.75. Supplement may be purchased separately for \$1.50.

First published in 1961, this widely used annotated bibliography has now been brought up to date with the addition of a supplement containing 340 new references in addition to the more than 1,000 references of the

original edition. Detailed subjects include: statements of central place theory, studies of systems of central places, urban spheres of influence and trade areas, internal business structure, medical service areas, planned shopping centers and store location, consumer shopping and travel habits, land use and ecological theory. The original includes a synopsis of Walter Christaller's pioneering work Die Zentralen Orte in Süddeutschland.

New Highway Research Information Service, Highway Research Board

The Highway Research Board is developing a new automated storage and retrieval system called "Highway Research Information Service" (HRIS). Financial support for the development of this Service comes from the state highway departments through the National Cooperative Highway Research Program and from the Bureau of Public Roads.

The Board has long provided information service to highway departments, universities and others through its Research Correlation Service. The new HRIS simply provides an automated and extended arm to this long-established service, recognizing that information in highway technology is now developing faster than it can be assimilated and disseminated by conventional methods.

Input to the new system will be selected articles or abstracts of articles of interest to the highway fraternity, indexed in depth in accordance with a new thesaurus of index terms covering highway transportation research. In addition to published material, the system will include up-to-date information on research that is presently underway throughout the country. Computer techniques will be used to retrieve stored information which corresponds to the index term requirements of inquiries put to the system.

A technique is being developed whereby potential users of this system will be identified by areas of interest in such a way that new material coming to the system, which is of particular interest to certain users, can be sent automatically to them.

Schedules at the present rate of funding call for the system to be complete insofar as on-going research is concerned by summer, 1965, and for coverage of the literature as far back as 1964 by mid-1967. To meet these schedules the active participation of the Research Board's committeemen and authors will be requested. (PEI and WNC, Jr.)

Hydata American Water Resources Association

A monthly bibliography called Hydata, covering international periodical literature dealing with water resources science and technology, is now being published by the American Water Resources Association. Founded in 1964, the ARWA has as its principal objectives the advancement of water resources research, planning, development and management; the establishment of a common meeting ground for engineers, and natural, physical and social scientists concerned with water resources; and the collection, organization and dissemination of ideas and information in all fields covered by the term "water resources science

and technology." Hydata is regarded as a first step toward fulfilling these objectives, and it is hoped will make a significant contribution to the program of the Water Resources Research Act, as well as to the International Hydrological Decade. Further information can be obtained from S. C. Csallany, Secretary, American Water Resources Association, P.O. Box 434, Urbana, Illinois 61802.

HOUSING

Fair Housing Laws

Within the past five years, 12 states have enacted fair housing laws which prohibit discrimination with respect to privately financed housing. Six other states have statutes applicable to various categories of publicly assisted housing. In addition, 34 municipalities have adopted fair housing ordinances covering private housing. Brief summaries, as well as the text of most state and municipal laws, are available in a handbook issued in February, 1965, by the Housing and Home Finance Agency. The 372 page document, entitled Fair Housing Laws, is available from the Government Printing Office, Washington, D.C. 20402, for \$1.50.

MISCELLANEOUS

Public Automated Systems Service

Public Automated Systems Service is the name of a newly established unit associated with the Public Administration Service, 1313 East 60th Street, Chicago, Illinois 60637. Devoted to the effective use of automation in government, PASS will carry on an active program of publishing, research and consulting. It will also operate a personnel exchange. A monthly newsletter, Public Automation, in addition to reporting generally on developments in the field, will contain a feature insert article in each issue under the general title Output. Other publications scheduled for release in 1965 include the following: (1) Automation in the Public Service: An Annotated Bibliography. (2) Automated Data Processing in State Government. (3) Automated Data Processing in Municipal Government.

Library of Urban Affairs

Newest arrival on the book club front is a fledgling entitled the Library of Urban Affairs. Intended for persons interested in a broad prospectus of urban life, the group will offer members monthly selections made by an editorial board consisting of Charles Abrams, Herbert Gans, E.A. Gutkind, Michael Harrington, Anna Arnold Hedgeman, Joseph D. Lohman, Arthur Naftalin, Frank Riessman, and Christopher Tunnard. Further information can be obtained from Library of Urban Affairs, 59 Fourth Avenue, New York 10003.

Equalop: Planners for Equal Opportunity

Use of their professional competence to safeguard rights of minorities, to oppose discrimination, to provide equal enjoyment of the fruits of our affluent society, and to support the increase of political influence and independence of minorities is the aim of a group of especially socially-minded planners who have banded together under the name Equalop: Planners for Equal Opportunity. A national membership organization operating primarily through chapters in metropolitan areas, states or regions, the group will carry on a variety of activities, including offering advice and professional aid to local or community groups; preparing statements or position papers on general issues within its competence; publishing a newsletter and other materials; and promoting the entry of minority group members into planning and allied professions, as well as encouraging the recruitment of minority applicants by professional schools. Further information can be obtained from Robert Heifitz, Organizing Chairman, 76 Reade Street, New York 7, New York.

AVAILABLE BACK ISSUES OF RESEARCH DIGEST

A few copies of the back issues below are still available. Issues through Vol. 10, No. 1 may be purchased at \$1.00 per copy. Beginning with Vol. 10, No. 2 the price is \$2.00 to individuals and \$3.00 to organizations.

Vol. 8	No. 2	November, 1961
Vol. 9	No. 1	April, 1962
Vol. 10	No. 1	April, 1963
Vol. 11	No. 1	April, 1964
Vol. 11	No. 2	November, 1964

A few copies of the Indexes to Volume 9, Volume 10, and Volume 11 are also available at \$1.00 each.

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Volume 12

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Fall, 1965

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UNIVERSITY OF ILLINOIS

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Editorial Notes

The editor is very pleased to announce receipt by the University of Illinois of a grant from the National Science Foundation to assist in a three-year program of expansion and improvement of the Research Digest. A companion grant from Resources for the Future, Inc. is anticipated in the near future. He is equally pleased to announce the appointment of Dr. Joyce C. Sozen as Associate Editor. Further announcements concerning the development program will be made at an early date. (SK)

Founded in 1954 by an informal organization known as the Urban Planning Research Group, the Research Digest is prepared and distributed semi-annually in April and November, by the Bureau of Community Planning of the University of Illinois. Its objective is to serve as a medium of communication among individuals and groups engaged in urban and regional research. Abstracts are invited covering research projects recently initiated, projects well underway on which significant progress or findings can be reported, and projects recently completed. Brief notes on items of interest to researchers in this field are also desired, as are special articles in keeping with the character of the publication. Subscription is \$4.00 per year for individuals and \$6.00 for organizations. Address all communications to Research Digest, Bureau of Community Planning, University of Illinois, 1202 West California Avenue, Urbana, Illinois 61801.

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UNITED STATES

1. SNOW REMOVAL AND ICE CONTROL IN URBAN AREAS

Main Investigator: Donald Wagner.

Status of Research and Publications: Volume I of final report issued.
Completion of Volume II expected before March 15, 1966.

Agency: American Public Works Association, Research Foundation, in cooperation with Fels Institute and 80 municipal and state agencies, under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem: More than \$100 million is spent annually by municipalities in the snowbelt of North America to combat the effects of winter storms (snow and sleet). The purpose of this research is to find the most economical and effective technological, operational, and administrative procedures to be used in snow removal and ice control.

Major Findings: Despite a general paucity of reliable data, it was found that the major cost of winter storms is borne by the highway user. Increased cost of vehicular use resulting from adverse road conditions far exceeds losses experienced by industry and commercial enterprises. One study indicated that an urban community could, when viewed over an entire season, anticipate 144 vehicular accidents per inch of snow. There are indications that improved weather forecasting might save considerable sums of money. Strong traffic control and parking ordinances can cut the cost of certain snow removal operations as much as 50 to 60 percent. Public attitude, cooperation and experience in winter driving are all factors which significantly affect the cost of snow removal operations. While non-ionizing chemicals are available, their cost in a snow and ice melting system is excessive compared with salt and calcium chloride. There is a growing use of thermal type melters, which, in view of the cost of storms, may be justifiable in certain installations such as expressway ramps and bridge decks. (RKL)

2. NEW DIRECTIONS IN LAND USE CLASSIFICATION

Main Investigator: Albert Z. Guttenberg.

Status of Research and Publications: Report under this title published October, 1965. A more detailed report entitled An Experiment in Modal Land Use, to be published by the University of Illinois, Bureau of Community Planning.

Agency: American Society of Planning Officials in cooperation with University of Illinois, Bureau of Community Planning

Previous Digest Report: None.

Research Problem. To broaden current land use classification, and to show how classifications called modal classifications may be developed which take into account more of the functions of planning than do current classification schemes.

Previous Relevant Research. By this investigator, "A Multiple Land Use Classification System," Journal of the American Institute of Planners, Vol. XXV, No. 3, August, 1959, pp. 143-150; "New, Old Criteria Explored in Search of Means of Evaluating Non-Residential Properties," Journal of Housing, No. 2, 1964.

Hypothesis. That most land use classification schemes are limited to description and analysis of the land use parcel.

Major Findings. The author develops a three-part land use classification system. The first part is used to classify the land use object by its directly observable characteristics (i.e., site development, facility type, activity type, and activity characteristics) and its underlying, not directly observable characteristics (i.e., economic function, ownership, and other legal characteristics). The second part is used to evaluate the land use object, classifying it in terms of quality, economic durability, and social impact. The third part is used to designate what kind of change, if any, should be made to the land use object. In this mode, the type of change (use, facility, site or operational change) is considered as well as the means of change (i.e., public purchase, eminent domain, police power, persuasion or tactics). (AZG and JK)

3. THE DISPOSAL OF JUNKED CARS

Main Investigator: Frank Beal.

Status of Research and Publications: Report published August, 1965.
(Available only to subscribers to ASPO Planning Advisory Service.)

Agency: American Society of Planning Officials.

Previous Digest Report: 12:1-8.

Research Problem. To evaluate the problems caused in many communities by the increasing number of automobiles junked each year, and to consider possible solutions.

Method of Study. The study describes and analyzes techniques available for controlling the maintenance, operation, and location of junk, auto wrecking, and scrap processing yards; describes the operational needs and location requirements of these land uses; analyzes the control techniques of zoning and licensing.

Major Findings. The only effective, long-term solution to the problems posed by the proliferation of junked cars is to increase the demand for scrap steel. Because the likelihood of an increase is remote, a number of observers have suggested that the disposal process be publicly subsidized. Local communities which exclude the scrap businesses or subject them to excessive controls hinder the proper functioning of the disposal process. Regulatory measures should be designed to strike the proper balance between the locational and operational needs of the scrap businesses and the protection of the public. (FB)

4. PROTECTING URBAN VIEWS

Main Investigator: Margot S. Parke.

Status of Research and Publications: In process. Scheduled for publication February, 1966.

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. To explore provisions of zoning ordinances of various communities which want to safeguard topographical features from inappropriate development. Protection, both from the standpoint of the private developer who wishes to insure the value of his real estate and from that of the municipality which desires to maintain a special community appearance, will be considered. Non-zoning provisions, such as scenic easements and the purchase or lease of air rights, will be studied. (MP)

5. COMMUNITY RENEWAL PROGRAM STRATEGIES

Main Investigator: Frank Beal.

Status of Research and Publications: In process.

Agency: American Society of Planning Officials.

Previous Digest Report: None.

Research Problem. A comparative analysis of the goals, strategies and programs contained in a number of Community Renewal Program reports. (FB)

6. INDUSTRIAL REDEVELOPMENT

Main Investigator: Leopold A. Goldschmidt.

Status of Research and Publications: Part I, dealing with context, published November, 1965. Part II, dealing with past research,

scheduled for publication December, 1965. (Available only to subscribers to ASPO Planning Advisory Service.)

Agency: American Society of Planning Officials.

Previous Digest Report: 12:1-7.

Research Problem. To investigate the feasibility of industrial redevelopment in central urban areas, conditions of success, possible alternate solutions, and cost. Also, to review past studies of industrial blight and obsolescence as well as surveys of industrial attitudes toward the environment. Special emphasis is given to the two-pronged Chicago effort to assess the over-all quality of the city's industrial plant and to alleviate immediate problems of individual industrial enterprises.

Major Findings. Part I: Within the context of presently discernible trends, the outlook is for an increasing shortage of industry in the face of increasing competition among communities for industries. For many communities, therefore, industrial redevelopment will be geared toward the retention of existing industries under imperfect conditions rather than the attraction of new ones and the creation of perfect conditions. The two goals of redevelopment--support of the economic base and elimination of blight--may at times be in conflict. Determining long-range and short-range priorities is an essential part of a redevelopment program. (LG)

7. OPTIMUM LOCATION OF LIVESTOCK AND MEAT MARKETING FACILITIES IN THE SOUTH

Main Investigator: M. J. Danner.

Status of Research and Publications: In process.

Agency: Auburn University, Agricultural Experiment Station.

Previous Digest Report: None.

Research Problem. (1) To estimate (a) available supplies of feeder animals by areas; (b) costs of transferring feeder animals from areas of production to alternative feeding areas; (c) feed conversion rates and feed costs for alternative feeding areas; (d) area differences in procurement, slaughter, and processing costs; (e) costs of transfer of slaughter animals to alternative slaughter areas; (f) demand for meat by areas; and (g) costs of transferring meat from alternative slaughter areas to consumption areas. (2) Based on the estimates from Objective (1), to determine optimum location of facilities for livestock feeding, slaughtering, and processing under current and projected conditions. (3) To compare optimum and actual patterns of location for the current period and make recommendations to effect adjustments to future optimum locations of livestock feeding, slaughtering, and processing facilities.

Method of Study. Project will deal specifically with feeder animals and feeding systems with emphasis on cattle. Feeder cattle supplies will be estimated as to weight, sex, and seasonal availability. Feed costs and conversion rates will be determined. A programming model that will include data inputs of feeder supplies and feeding costs will be used in deriving adjustments needed for optimum conditions in livestock feeding. (MJD)

8. LATIN AMERICAN INTEGRATION: METHODOLOGICAL ESSAYS

Main Investigator: Joseph Grunwald (editor).

Status of Research and Publications: Completion expected December, 1965.

Agency: Brookings Institution, Foreign Policy Studies, Economic and Social Development Section.

Previous Digest Report: None

Research Problem. A collection of methodological essays which deal with Latin American integration from the standpoint of planning the optimum allocation of resources. (JG)

9 INTRA-LATIN AMERICAN TRADE PATTERNS AND THE FREE TRADE AREA

Main Investigators: Donald Baerresen, Martin Carnoy, and Joseph Grunwald.

Status of Research and Publications: Completed October, 1965.

Agency: Brookings Institution, Foreign Policy Studies, Economic and Social Development Section.

Previous Digest Report: None.

Research Problem and Major Findings. Presents statistics of general trade patterns of LAFTA (Latin American Free Trade Association) members with the world in the past twenty-five years and a detailed breakdown of commodity exports of LAFTA members, Bolivia and Venezuela, to other LAFTA countries, Bolivia, and Venezuela. As a background for this data, the study presents an historical chapter on Latin American trade from Spanish colonization to the present and an overview of some of the trade issues leading to the formation of LAFTA. No analysis of the data is attempted because of the short lapse of time since the Montevideo Treaty of 1961. (JG)

10. LATIN AMERICAN INTEGRATION: THE DEMAND AND SUPPLY OF INDUSTRIAL COMMODITIES

Main Investigators: Joseph Grunwald and Martin Carnoy.

Status of Research and Publications: In process. Completion expected June, 1966.

Agency: Brookings Institution, Foreign Policy Studies, Economic and Social Development Section, in cooperation with economic research institutions in nine Latin American countries: Argentina-Centro de Investigaciones Economicas del Instituto Torcuato Di Tella (also preparing data for Paraguay); Brazil-Faculdade de Ciencias Economicas e Administrativas de la Universidade de Sao Paulo; Chile-Instituto de Economia de la Universidad de Chile; Colombia-Centro de Estudios Sobre Desarrollo Economico de la Universidad de Los Andes; Ecuador-Centro de Desarrollo; Mexico-Nacional Financiera; Peru-Facultad de Ciencias Economicas y Comerciales de la Universidad Nacional Mayor de San Marcos; Uruguay-Instituto de Economia de la Facultad de Ciencias Economicas y de Administracion e la Universidad de la Republica de Uruguay; Venezuela-Centro de Estudios del Desarrollo de la Universidad Central de Venezuela.

Previous Digest Report: None.

Research Problem. A study of six major commodities in the context of the Latin American Free Trade Association.

Method of Study. Demand and supply projections for the LAFTA market will be made to 1975. From these projections, comparative advantage in production of each commodity will be derived. In the final analysis, recommendations can be made for the location of new investment in LAFTA. (JG)

11. IMPACT OF MIGRATION ON THE SOCIO-ECONOMIC STRUCTURE OF CITIES AND SUBURBS

Main Investigators: Sidney Goldstein and Kurt B. Mayer.

Status of Research and Publications: Completed and published in Sociology and Research, 1965, 50, 1, October, 1965, pp. 5-23.

Agency: Brown University, Department of Sociology and Anthropology.

Previous Digest Report: None.

Research Problem and Method. The role of migration in population redistribution within one of the older metropolitan areas was investigated by using special census tract tabulations for the Providence-Pawtucket metropolitan area, indicating the migration status of the population, and cross-tabulated by education, occupation and income.

Major Findings. Migrants into both the central cities and the suburbs resemble each other more closely than do the non-migrants in the respective areas. Nevertheless, migration contributes to increasing socio-economic differentiation of cities from their suburbs

(1) through the much larger numerical flow of persons to the suburbs than to the cities, and (2) through the greater concentration of the suburban migrants in the higher status groups, reflecting the predominance of high status areas in the suburbs. These conclusions, which differ partially from research on other metropolitan areas, probably stem from a more refined delineation of the suburbs through exclusion of industrial satellite communities from the metropolitan ring. (SG)

12. CALIFORNIA URBAN POLICY FOR INTERGOVERNMENTAL ACTION

Main Investigators: Roy Sorenson, Chairman; Philip G. Simpson, Executive Secretary; and 17 other local, state and public members appointed by Governor Edmund G. Brown.

Status of Research and Publications: Continuing study. First Report issued January, 1965.

Agency: Coordinating Council on Urban Policy, State of California (State Capitol Building, Sacramento).

Previous Digest Report: None.

Research Problem. (1) To analyze the trends, conditions, needs, and problems affecting local government in California's rapidly growing urban areas; (2) define the complementary roles of the state and local units with respect to such growth; (3) develop long-range policies to assist the state and local agencies in meeting growth problems; and (4) recommend appropriate policies and programs to the Governor for the attainment of these ends.

Method of Study. For first year: (1) audit performance, standards, problems, and powers of local agency formation commissions; (2) study the programs of organizing and financing regional planning programs; (3) study the experience of state and local units of government in coordinating their activities on a regional basis.

Major Findings. At the end of the first year, the Council made nine policy recommendations for treating urban growth problems through coordination of local, state and federal government activities in urban areas, and specified steps which can be taken to support them. The recommendations call for efforts leading towards (1) strengthening the powers of cities and counties to act on urban growth problems, both independently and cooperatively on an area wide basis; (2) coordination of local, state and federal planning, programs and projects with each other and with private development in each urban area; and (3) coordination of public and private social programs to meet social needs under Community Action Programs as defined in the Economic Opportunity Act of 1964. (PGS)

13. ECONOMIC ADJUSTMENTS FOR CALIFORNIA'S MANUFACTURED DAIRY PRODUCTS INDUSTRY

Main Investigator: Olan D. Forker.

Status of Research and Publications: Major portion of project completed and published in California Agricultural Experiment Station Bulletin No. 816, August, 1965. 62 pp.

Agency: University of California (Berkeley), Agricultural Experiment Station, with support of United States Department of Agriculture, Cooperative State Experiment Station Service.

Previous Digest Report: None.

Research Problem. To determine location, capacity of available facilities in California, quantities of milk available for manufacture, and demand for processed products by geographic areas served; indicate nature of reorganization of supply and market areas required to minimize marketing costs in meeting market requirements; project future availability and market requirements of milk for manufacturing purposes to determine most efficient use of supplies; determine optimum size, location, and type of plants to minimize marketing costs.

Major Findings. Projections of significant trends indicate that milk production in California will continue to exceed Class I needs through 1975 but that the quantity available for manufactured dairy products will decline. Economic analysis of industry adjustments points toward fewer but larger manufacturing plants with most of them specializing in ice cream and cottage cheese manufacture. A case study of six cooperative dairies in the San Joaquin Valley indicates that substantial economic gains are possible through consolidation or merger of their activities. The over-all study includes projections of the supply and demand for milk, of industry structure, and of possible industry reorganization to adjust to changing economic conditions. (ODF)

14. PSYCHOSOCIAL FACTORS IN HOUSING FOR THE AGED

Main Investigators: Daniel M. Wilner, Rosabelle Price Walkley, Wiley P. Mangum, Jr., Susan R. Sherman, and Helge H. Mansson.

Status of Research and Publications: Phase I completed; Phase II in process.

Agency: University of California (Los Angeles), Department of Public Health Administration.

Previous Digest Report: None.

Research Problem. Phase I: To survey all types of special housing for the elderly in California. Phase II: To study the effects of several selected housing environments.

Method of Study. Data for Phase I were collected by means of structured questionnaires sent to housing managers. For Phase II a test group of approximately 600 persons, living in housing settings planned especially for older people, is matched to a control group (also about 600 persons) living in usual urban neighborhood circumstances. The effects of these different housing environments on the mental, emotional and physical well-being of the elderly residents will be measured over an 18-month period. Data are being collected through personal interviews, social anthropological field investigations, and from records.

Major Findings. Phase I survey (completed) provides a census of planned housing completed, under construction, and planned for the future throughout the state, and includes an account of the physical and social characteristics of each housing site. (SRS)

15. INTERNAL MIGRATION AND ECONOMIC OPPORTUNITIES

Main Investigator: Ira S. Lowry.

Status of Research and Publications: Research completed. Publication expected Winter, 1965

Agency: University of California (Los Angeles), Institute of Government and Public Affairs, in cooperation with the Rand Corporation, under sponsorship of Resources for the Future, Inc

Previous Digest Report: None.

Research Problem. To find a reliable method for predicting migration flows to and from labor markets.

Previous Relevant Research. Cicely Blanco, The Determinants of Regional Factor Mobility.

Hypothesis. Internal migration is primarily a response of labor-force members to differences in economic opportunity, the response being attenuated by distance. Persons not in the labor force move primarily to accompany family members who are economically active

Method of Study. Regression analysis of two sets of data (1) Dependent variable: 1955-60 matrix of inter SMSA (Standard Metropolitan Statistical Areas) migration flows. Independent variables for both origin and destination: size of civilian, military labor force; air line distance; unemployment rates; manufacturing wage rates. (2) Dependent variable: 1950-60 net migration to each of 52 large SMSAs, total and persons 15-64 years of age. Independent

variables: natural increase in resident population 15-64 years of age; change in demand for civilian labor; change in military population; change in school enrollment, 15-29 years of age; change in median family income.

Major Findings. Out-migration from a labor market appears to be independent of absolute or relative opportunities there. Instead, it seems to be a function of the demographic structure (e.g., age/sex) of the local resident population. But choice of destination is influenced strongly by distance and relative economic opportunities. Variations in net in-migration for a given labor market can be explained almost entirely by variations in "prospective unemployment"--i.e., natural increase in the resident labor force minus change in the demand for labor. Results confirm findings of Blanco. (ISL)

16. ANALYSIS OF THE LOS ANGELES RACE RIOTS

Main Investigators: Werner Z. Hirsch, Stanley C. Plog, Nathan Cohen, Walter Raine, and others.

Status of Research and Publications: In process.

Agency: University of California (Los Angeles), Urban Observatory of Institute of Government and Public Affairs.

Previous Digest Report: None.

Research Problem. To study causes of the recent race riots in the Watts and South Central areas of Los Angeles, potential remedies for these causes, the long-term effect of the riots on attitudes and behaviors of the white and Negro communities, and the long-term effects of the riots on such social and political developments as the Civil Rights Movement, Community Action Programs, Negro leadership patterns, etc. (WZH)

17. URBAN STRUCTURE OF THE SOVIET UNION

Main Investigator: Chauncy D. Harris.

Status of Research and Publications: In process. Completion expected autumn, 1966.

Agency: University of Chicago, Department of Geography, supported by National Science Foundation.

Previous Digest Report: None.

Research Problem and Method. To analyze the urban structure of the Soviet Union as a system, with measurement of the distribution of cities in space, their size and growth characteristics, and the

principal activities carried on in them (economic base or functional structure). Textual, cartographic, and statistical sources are utilized in an analysis of interrelationships. (CDH)

18. A POLITICAL PROFILE: CITY IN THE DESERT

Main Investigator: Paul F. Roach.

Status of Research and Publications: Completed and submitted as a doctoral dissertation, June, 1965.

Agency: Claremont Graduate School and University Center.

Previous Digest Report: None.

Research Problem. To determine how the unincorporated, rapidly-urbanizing central section of California's Coachella Valley is governed; to discover why it is governed as poorly as many of its residents assert and as the record of public policy failures respecting its natural features (its sole economic resource) would suggest.

Method of Study. The problem was defined spatially as encompassing "greater Palm Desert"--the mid-Valley area first to be heavily settled, a virtual "city in the desert" midway between the true cities of Palm Springs and Indio. The problem was conceived politically in the broadest sense, with every aspect of the people's public and organizational life considered relevant to their efforts at self-direction. Investigation centered on (1) the unplanned, complex structure of public authority which has grown up in the mid-Valley in two decades of rapid development; (2) functions of federal, state, county and special purpose agencies serving the area; (3) many unofficial, continuing and ad hoc associations which attempt to influence the area's development; (4) views of people in government, private organizations, business, churches and education, concerning the adequacy of governmental processes, policies and performance.

Major Findings. Despit the growing scope and impact of federal, state, and county programs, there remains a need in "desert city" for municipal government. Formation of municipal government is imperative if there is to be recognition and solution of uniquely local problems, proper interpretation and local application of federal and state programs, and development of the desired community sense and community identity. Public needs approaching crisis proportions will soon impel incorporation despite conflict and division over ultimate purposes and values, which have heretofore precluded agreement on cityhood. Once the structure is established, it will facilitate the application of logical solutions to future community needs and problems. (GSB)

19. BOSTON AND NEW YORK CITY SOCIAL INFLUENCE ON THE PEOPLE OF THEIR COMMON HINTERLAND

Main Investigator: David E. Buerle.

Status of Research and Publications: Completed and submitted as doctoral dissertation, Clark University, Graduate School of Geography.

Agency: Clark University, Graduate School of Geography.

Previous Digest Report: 12:1-35.

Research Problem. To measure the relative extent of Boston and New York City influence on people living in the area between them; to identify and explain some of the reasons for variations in the spatial distribution of this influence.

Major Findings. Communicational contacts with the two terminal cities are experienced by hinterland residents to a considerable degree, actual movement to a much smaller one. In some areas a high degree of non-association with either urban place was evinced, attributable in part to the presence of similar services available in smaller hinterland cities. The report defines boundaries, delimiting areas of primary orientation to each of the major cities. The boundaries reveal that the larger city dominates the hinterland as a communications center, an important recreational center, and encourage more travel to it. The smaller city dominates the hinterland in its role as an institutional center, in this study, a medical center and a center of institutions of higher learning. Most of the boundaries exist nearer the smaller city, suggesting that the larger population center, with its wider range of services, most often will possess the larger hinterland. In some cases, the superior quality of certain services in the smaller urban place may be instrumental in attracting people to it over great distances. Distance may not be as important in influencing direction of movement as it is sometimes thought to be. (REM)

20. SUCCESS AND FAILURE OF MIGRANTS TO AN URBAN MILIEU

Main Investigators: Ozzie G. Simmons, Robert C. Hanson, and Jules J. Wanderer.

Status of Research and Publications: In process.

Agency: University of Colorado, Institute of Behavioural Science, under sponsorship of U. S. Department of Health, Education and Welfare, Public Health Service.

Previous Digest Report: None.

Research Problem. To identify and explicate the social processes leading to success or failure of Spanish-speaking migrants in the urban milieu.

Method of Study. Collect relevant data about the attributes the migrant brings with him, the urban role-path he travels, the sequence of events that characterize his movements along a role-path, the characteristics of the urban milieu, and evaluations of his success and failure. The major components of the research are: (1) formulation of an initial conceptual framework based on the pertinent research literature and the collection and analysis of intensive case histories, (2) development of a model of urbanization processes and computer simulation of these processes, (3) test of the model on an additional body of empirical data collected from a relatively larger random sample of migrants. (OGS)

21. MEASURING THE SENSITIVITY OF THE INTERNAL ECONOMY OF AN ECONOMIC BASE

Main Investigator: Maurice A. Unger. .

Status of Research and Publications: Initial results published in Technical Valuation, Vol. 13, No. 3, Spring, 1965, pp. 18-24. Further research on methodology in process.

Agency: University of Colorado, School of Business.

Previous Digest Report: None.

Research Problem. Development of an Urban Sensitivity Factor Model to correlate changes in disposable income with changes in consumption expenditures, and use of this model to predict growth of an economic base, as well as comparison of relative volatility of different economic bases.

Major Findings. Method may offer advantages comparable to input-output analysis, but with nominal expense and effort. Tests in two Colorado cities--Grand Junction and Pueblo--using 1957-1958 data showed high degree of accuracy when predicted and actual changes in total payrolls were compared. Frequent up-dating of predictions also appears feasible. (MAU)

22. THE SUCCESSFUL URBAN SLUM CHILD: A PSYCHOLOGICAL STUDY OF PERSONALITY AND ACADEMIC SUCCESS IN DEPRIVED CHILDREN

Main Investigators: Bernard Mackler, Thelma P. Catalano, and W. Dana Holman.

Status of Research and Publications: In process. Progress report under this title published by Columbia University, Teachers College, Institute for Urban Studies, March, 1965. See also "Cultural Deprivation: A Study in Mythology," by Bernard Mackler and Morsley G. Giddings in Teachers College Record, Vol. 66, No. 7, April, 1965, pp. 608-613. Completion expected summer of 1966.

Agency: Columbia University, Teachers College, Institute of Urban Studies, under sponsorship of U. S. Department of Health, Education, and Welfare.

Previous Digest Report: 12:1-41.

Research Problem. Study the urban slum child, his social and academic world, to determine why one child succeeds and another does not.

Method of Study. The first year, a thorough study of the academic and school environment was made. Children in one elementary school were tested on scholastic, intelligence, creativity, and sociometric tests. Teaching and administrative personnel were interviewed and selected classes observed. Some parent interviews were conducted. The aim of this phase was to ascertain and identify the various abilities of each pupil and his school milieu. The second year, a group of relatively successful students will be selected, and analytical comparisons of home and peer group affiliation will be made with these students and average and failing students. Selected factors, such as the relative size of families, income, father in home, will be matched for the three groups of successful, average, and below-average students. The third year will be an intensive study of children who succeed academically and those who do not. An attempt will be made to measure the individual's desire to succeed academically. Test construction will include a survey of available material and literature related to academic motivation and motivation per se.

Major Findings. Data from family interviews suggest that one encouraging, stimulating adult figure in a child's background is probably essential for success in school. For some children born out of wedlock, this is the mother; for others it is the "adopted" parents, i.e. parents who are given the child by the "real" mother, who requested that these adults take care of the child for a while.

All the parents felt the importance of education, that education would be a way out of the ghetto, but became vague when asked how this would help the child when he became 17 or 18 years old. The focus on education seemed unclear for they knew little of the routes of educational opportunity after high school graduation.

Preliminary observation data indicated that boys and girls reacted differently to school, and the school differentiated by reprimanding the boys' aggressive behavior. Behavior appeared a more important consideration for academic success than ability, per se. That is, a quiet and polite boy would be rewarded by being placed in the best class in the grade, whereas a boy of comparable ability, if he were vigorous, would be placed in an academically less desirable class. Scoring of selected achievement tests and intelligence tests appears to corroborate the above in that high ability children, usually boys, were found in the lowest achieving

classes. Initial interviews with administrators and teachers support our view that selection based upon behavior does play a role. (BM)

*The Institute for Urban Studies of Teachers College, Columbia University, was recently merged with the newly formed Center for Urban Education. (See below, p. 103 .)

23. IMPACTS OF METROPOLITAN GROWTH ON CAPITAL PROGRAMING AND LAND USE IN RURAL SUBURBAN TOWNS

Main Investigator: Arthur W. Dewey.

Status of Research and Publications: In process.

Agency: University of Connecticut, Agricultural Experiment Station.

Previous Digest Report: None.

Research Problem. To discover and analyze basic land use trends in suburban towns of Connecticut by (1) identifying land use conditions that make public actions desirable; (2) relating public actions for capital expenditures to subsequent changes in land use under different political, social, and economic situations; and (3) developing and testing models for predicting land use changes in response to politico-socio-economic forces that affect the reallocation of space among competing and complementary land uses.

Method of Study. Generalizations will be made on the sequential stages of suburban development by measuring trends in the size and character of land classes within selected towns. Land classification will be based on the suitability of areas for public and private investment. The determined changes in land use will be associated with economic activity and population growth within the metropolitan area and with the kind and amounts of private investments made in adjacent towns. Finally, the antecedent-consequent sequences of events will be established between land use changes and public investments in schools, sanitary sewers, water supplies, refuse disposal facilities, fire stations, and governmental buildings. (EGS)

24. CHANGES IN RURAL SOCIAL PATTERNS RELATED TO SUBURBANIZATION

Main Investigator: Walter C. McKain, Jr.

Status of Research and Publications: In process.

Agency: University of Connecticut, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture, Cooperative State Experiment Station Service.

Previous Digest Report: None.

Research Problem. To analyze three types of commuting on the part of rural residents: (1) occupational commuting--movement of rural people to and from their places of work and the related problems of decentralization of industry and the shift between farm and nonfarm occupations; (2) commuting for business and professional services--patterns of retail trade and decentralization of business and professional services; (3) commuting for leisure time activities and social participation--the social attachments of rural people to the city, recreational land use in rural areas. Furthermore, the study will classify patterns of suburbanization existing in rural sections of one Standard Metropolitan Area, identify special problems existing in each kind of suburb, and indicate steps that are being or can be taken by rural people to meet these problems.

Method of Study. Analysis of seven types of impact of Connecticut Turnpike, using both primary and secondary data. Method includes: (1) before and after comparisons; (2) use of an area control group; and (3) the process by which change occurs. (WCM)

25. ASSESSMENT AND TAXATION OF FARMLAND IN RURAL-URBAN AREAS OF NEW YORK STATE

Main Investigator: E. A. Lutz.

Status of Research and Publications: In process.

Agency: Cornell University, Agricultural Experiment Station.

Previous Digest Report: None.

Research Problem. Analysis of the amounts of property taxes on farmland in fringe areas around urban centers, and the effects of these taxes on use and ownership of farmland. Evaluation of alternatives to the ad valorem tax on these properties. Development of recommendations for improved policies.

Method of Study. Case studies in one or two selected urban centers in New York State. (EAL)

26. MULTIPLE PURPOSE WATER RESOURCE INVESTIGATIONS

Main Investigator: Lawrence S. Hamilton.

Status of Research and Publications: A continuing project with reports issued as specific sub-projects are completed. Four publications issued to date (see below).

Agency: Cornell University, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture, Cooperative State Experiment Station Service. Cooperation with U.S.D.A.

Soil Conservation Service; New York State Department of Conservation; Division of Water Resources; and Temporary State Commission on Water Resources Planning.

Previous Digest Report: None.

Research Problem. To investigate critical multiple-use problems of New York's surface waters, and to provide information on which the formulation of private and public policies concerning the use and development of this resource may be based.

Major Findings. Initial investigation was a study of the extent of multiple use permitted on municipal water supply reservoirs and reservoir lands in New York State. Information was collected from 95 municipalities having exclusive control over 178 reservoir areas which were large enough to permit other uses such as recreation. Factors contributing to the establishment of reservoir policy were investigated, particularly public health, legal and economic considerations. These were analyzed for validity in view of mounting recreational pressures for access to water and land. Findings are presented in E. T. Van Nierop, "A Framework for the Multiple Use of Municipal Water Supply Areas," doctoral dissertation, Cornell University, June, 1963, 155 pp.; Lawrence S. Hamilton and E. T. Van Nierop, "Should We Fish and Boat on Our Reservoirs?" N. Y. State Conservationist, Vol. 20, No. 2, 1965, pp. 12-14.

A second investigation focused on two small watershed districts, the first ones to be established in New York under Public Law 566. These were case studies in the area of financing and administration, which might offer guidelines to other watershed districts underway or planned. Findings are presented in Lawrence C. N. Burgess and Lawrence S. Hamilton, "A Comparative Study of the First Two Watershed Districts in New York State; Guideposts for Future Local Action Under Public Law 566," Report to New York Temporary State Commission on Water Resources Planning, Department Conservation Leaflet C 39, Cornell University, December, 1963, 17 pp.

The New York State Barge Canal has been in the middle of somewhat violent controversy over the past five years as the legislators and people of New York have debated whether or not to transfer title to the federal government. Appropriate material germane to this issue has been collected, analyzed and presented in a report by Ronald L. Shelton, "New York State Barge Canal System," Cornell University Water Resources Center, Ithaca, N. Y., 1965, 66 pp.

Currently underway is a study of local participation in resource development programs which are tied to water projects. The emphasis here is on the Small Watershed Protection and Flood Prevention (PL 566) projects in the Northeast. Completion expected by September, 1966. (LSH)

27. ANALYSIS OF SOCIAL, ECONOMIC, AND NATURAL RESOURCES FOR PURPOSES OF PLANNING, SOUTHHOLD TOWN

Main Investigator: Robert L. Carroll.

Status of Research and Publications: In process.

Agency: Cornell University, Agricultural Experiment Station, under sponsorship of State of New York.

Previous Digest Report: None.

Research Problem. (1) Design an input-output matrix with which to gain knowledge of the economic base of the township and estimate economic changes under varying conditions. (2) Analyze the degree of compatibility-incompatibility between certain activities, e.g., summer-resort and agricultural activities. (3) Study the township in its historical context, emphasizing the expansion of New York City and its influence out Long Island, extrapolate these expansion trends into the future, and indicate their impact on Southhold Town. As part of this analysis, population estimates and projections will be made. (4) Analyze the differential characteristics between summer residents and permanent residents. (5) Analyze the impact of the recreational complex on the economy of the town and on the town's future. (6) Submit the above information to Town Planning Board for use in designing a town plan. Part of the project objective is to describe and analyze the planning process and to assess the usefulness of social scientists in the planning process.

Method of Study. Classify all structures in the township as to function. Take a random sampling of households, businesses, farms, and recreation users and interview people in these categories. Subject data to statistical analysis. (RLC)

28. URBAN HOUSING IN LATIN AMERICA

Main Investigators: Glenn H. Beyer, Tom E. Davis, and others.

Status of Research and Publications: In process. Completion expected in 1970.

Agency: Cornell University, Center for Housing and Environmental Studies, under sponsorship of Agency for International Development.

Previous Digest Report: None.

Research Problem. To study the relationships between the demographic, economic, health, political and social aspects of Latin America and its problems of housing and urbanization. One of the major foci of this study is to determine the significance of housing

and environmental conditions as an independent variable "explaining" various behavioral characteristics of low and lower-middle income households.

Method of Study. The first two years will be devoted to reviewing pertinent literature and developing and undertaking a pilot field survey in San Juan, Puerto Rico. The remaining three years will be devoted to preparing and undertaking field surveys in Buenos Aires, Sao Paulo, Santiago, Lima, and Bogota or Cracas. Major findings will be issued in a series of monographs: five discipline-oriented monographs (based on international comparisons) treating political sociology, family sociology, economics, demography, and health; five metropolitan areas studies; and a summary volume. (GHB)

29. URBAN HYDROLOGIC STUDY

Main Investigators: Iraj Zandi and R. Razaghy.

Status of Research and Publications: In process. Data have been collected since 1960 and partial analysis made by Johns Hopkins Drainage Research Project staff members.

Agency: University of Delaware, School of Engineering, Under sponsorship of Research Foundation.

Previous Digest Report: None.

Research Problem. The effect of urbanization of the relationship of rainfall and runoff.

Method of Study. Two specific areas, adjacent sections of East Cleveland Avenue in Newark, Delaware, are gaged. Precipitation and runoff are recorded continuously. East Cleveland Avenue is a bituminous paved street, 44 feet wide, having concrete curb as gutter sections. Area 1 is 0.636 acres, 100% impervious, with average slope of 3.35%; Area 2 is 0.955 acres, 100% impervious, with average slope of 0.68%. Rainfall is measured by a tipping bucket rain gage at each area. Runoff is measured by 9 and 12 inch Parshall flumes. (IZ)

30. THE ECONOMIC CONTEXT OF 1985 TRANSPORTATION COSTS IN THE PENN JERSEY REGION

Main Investigator: Abe Gottlieb.

Status of Research and Publications: Preliminary study completed but not yet released. P J Paper No. 23, Penn Jersey Transportation Study, 51 Street and Parkside Avenue, Philadelphia 31, Pennsylvania. June 21, 1965, 35 pp.

Agency: Delaware Valley Regional Planning Commission (formerly Penn Jersey Transportation Study).

Previous Digest Report: None.

Research Problem. Relationship of regional transportation needs, as expressed in cost estimates of alternate plans, with economic resources that are likely to become available as plans are taking shape.

Method of Study. The region's ability to meet projected transportation costs has been compared with the 1985 Basic Freeway Plan, the Maximum Freeway Plan and the Maximum Mass Transportation Plan. Cost components of these plans have already been developed as part of the overall transportation plan for 1985 and can be considered the future needs of the region under study. Regional transportation expenditures to 1985 have been derived by evaluating and projecting two features of the area's economy: (1) a system of regional accounts that includes personal consumption expenditures, regional income and gross regional product; (2) a number of proportions representing the transportation expenditure components of these regional accounts. The combination of regional accounts and proportions produces estimates of family and individual expenditures for transportation (auto ownership and operation plus transit fares); investment in mass transit facilities; government outlays for highways and roads. Implicit in these derivations are the assumptions that (1) major sectors of the Penn Jersey economy will advance at about the same rate as the national sectors between 1960-1985; (2) the principal sources of transportation funds in the Penn Jersey region will not vary substantially in the next two decades even though some of them may become considerably more significant. (AG)

31. GROWTH OF NON-FEDERAL PUBLIC EMPLOYMENT IN THE UNITED STATES, 1900-1963

Main Investigator: Thomas E. Borcharding.

Status of Research and Publications: Completed and submitted as doctoral dissertation, October, 1965.

Agency: Duke University, Department of Economics.

Previous Digest Report: None.

Research Problem. Analyze the growth of non-federal public employment in the United States from 1900-1963.

Method of Study. Derived demand analysis was employed to determine what factors, and the extent to which these factors, influenced the growth of direct non-federal employment. The analysis considered changes in the proportions in which labor and other inputs are combined, changes in the productivities of the factors, and changes in the demand for the resource-using services of non-federal governments.

Major Findings. Since 1900, except during the Depression and World War II, non-federal employment has grown steadily at

approximately 3% per year, while the total labor force has grown by only 2%. The ratio of non-federal employment to the total labor force rose from one worker in about twenty-five in 1900, to one in ten by 1963. When labor indirectly employed by non-federal governments as a result of their purchases from the private sector was considered, estimates of non-federal governments' share of the total labor force rose from one worker in fourteen in 1900, to one in seven in 1963.

There has been no significant substitution of capital and other inputs for labor in non-federal governments since 1900. However, the decline in average hours of work in non-federal activities might, at a maximum, explain 7% of the growth. New techniques of production have been introduced into these activities, and the quality of non-federal labor has risen. Since non-federal productivity figures were not available, it was necessary to use productivity estimates from the federal government and the private services industries as proxies. The annual rate of productivity increase of labor and other inputs employed by non-federal governments was between 0.5 and 1.5% per year. The non-federal labor force was 40 to 150% less in 1963 than it would have been had no productivity change taken place and had the same level of real goods and services been maintained.

The main determinant of the growth of non-federal employment was the growth of demand for non-federal goods and services. Multiple regression analysis was employed on non-federal employment data by states from the 1962 Census of Governments and the results applied to the entire period since 1900. Assuming productivity has risen by 0.5% per year, about half of the growth can be attributed to population increase; one-fifth to the growth of per capita income, federal grants-in-aid, and increased urbanization. Productivity increase contributed a negative one-fourth, and the residual 50% of the growth is imputed to changes in political and ideological attitudes and to the redistribution of political power. If productivity is assumed to have increased by more than 0.5%, then its negative contribution is greater, as is the positive contribution of the "political" factors, while the contributions of population and per capita income increase, urbanization, and grants-in-aid remain about the same. (TEB)

32. MENTAL HEALTH PROGRAMING IN FRAGMENTED URBAN AREAS

Main Investigators: Robert H. Connery, Richard H. Leach, and Alan C. Kerckhoff.

Status of Research and Publications: In process.

Agency: Duke University, Department of Political Science, under sponsorship of U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. A detailed survey of ten selected metropolitan communities to: (1) demonstrate the effect of fragmented government in metropolitan urban areas upon mental health programing; (2) indicate ways to overcome obstacles that fragmentation presents in developing new mental health programs; (3) indicate the range of political and administrative accomodations which should be made to assure full utilization of community resources in mental health programing.. (RHC)

33. A MODEL FOR ASSESSING THE FISCAL IMPACT OF FEDERAL ACTIVITIES ON UNITS OF LOCAL GOVERNMENT

Main Investigator: Bruce Fenwick Davie.

Status of Research and Publications: Not reported.

Agency: Georgetown University, Department of Economics, under sponsorship of U. S. Office of Education.

Previous Digest Report: None.

Research Problem. To develop a general model by which to assess the impact on state and local governments, particularly school districts, of those federal activities which require extensive installations.

Hypothesis. The presence of such an installation in a community tends both to increase tax receipts and require additional expenditures for schools and other public services. The net effect on receipts and expenditures must be determined if rational policies are to be followed by the federal government in attempting to ameliorate any burden which its activities place on local governments.

Method of Study. The model will be designed to accommodate existing data concerning the receipts, expenditures, and other characteristics of school districts, cities, counties, and states. It should be able (when applied to the requisite empirical data) to identify both the net effects of the introduction or withdrawal of a particular federal activity as well as the net effects of a continuing federal activity on a particular local government. A detailed study of sample localities would serve as a check on the validity of the general model. (BFD)

34. PROPERTY TAXATION IN THE UNITED STATES

Main Investigator: A. M. Woodruff.

Status of Research and Publications: In process. Publication expected 1966.

Agency: George Washington University, Department of Economics,
under sponsorship of Lincoln Foundation

Previous Digest Report: None.

Research Problem. To investigate major problems connected with administration of property tax in the United States in the nineteen-sixties, particularly assessment administration, and to evaluate various proposals made for improvement.

Previous Relevant Research. Recent work on this subject in general by the Advisory Committee on Intergovernmental Relations and in detail by the Urban Land Institute.

Major Findings. Problems of assessment administration arise because of the complexity and the imprecise nature of the market on which ad valorem assessments must be based. The largest component of the property tax base is real estate, and while buyers and sellers in some segments of the market develop close consensus as to property values, in other segments, such as industrial property, the market consensus is quite broad. The assessor measuring market value has little trouble where the consensus is close but increasing difficulty as it becomes broad and uncertain. The market for personal property included in the property tax base is even more difficult for an assessor to analyze. The problems of assessment are such that machinery must be provided for the redress of legitimate taxpayer grievances. The Advisory Committee on Intergovernmental Relations found that available means were deficient in many cases, and the present study explores this point further.

Among the suggestions for improvement of property tax administration, the most fruitful is increased participation of the states in assessment administration, preferably with cooperative arrangements between small districts or even better with consolidation of small districts, so that full-time personnel can be employed and protected by civil service. Under these circumstances the personnel can be required to undergo adequate training. The fragmentation of the country into great numbers of very small taxing districts requires the inordinate use of part-time assessors sometimes unduly sensitive to political pressures and with such uncertainty of tenure as to provide little incentive to professional development. (AMW)

35. FACTOR ANALYSIS OF SOCIO-ECONOMIC CHARACTERISTICS OF THE POPULATION OF WASHINGTON, D. C. AND THEIR RELATIONSHIPS TO HOUSING VALUES

Main Investigator: J. Tait Davis.

Status of Research and Publications: Research on Washington, D. C. completed and article to be published soon. Research to be extended to other cities.

Agency: George Washington University.

Previous Digest Report: None.

Research Problem. To determine what differences developed in the social and economic structure of the central city between 1950-1960 and how this structure and changes in this structure relate to housing values.

Previous Relevant Research. Results of a preliminary survey of some thirteen central cities reported in J. Tait Davis, "Middle Class Housing in the Central City," Economic Geography, Vol. 41, No. 3, July, 1965, pp. 238-251.

Hypotheses. Social and economic characteristics of the central city population do affect housing values and did affect patterns of change in housing values over the 1950-1960 decade.

Method of Study. Factor analysis was performed on data agglomerated by census tract for 1950 and 1960. Thirteen measures of social and economic condition were employed. The factor analysis identified major structuring factors. The relationship between housing values and major structuring factors were tested by means of a factorial experiment.

Major Findings. The factor analysis methodology and the design for the factorial experiment can be of value in testing the effect of selected measures on patterns of change. The effect of differing white non-white proportions in the population on housing values varies for different economic levels of the population and for different ages of housing, within the central city of Washington, D. C. This effect can be portrayed graphically and tested for significance. (JTD)

36. THE MAKING OF THE URBAN SCHOOL: EDUCATIONAL REFORM IN MID-NINETEENTH CENTURY MASSACHUSETTS

Main Investigator: Michael B. Katz.

Status of Research: Near completion. To be available as doctoral dissertation from Harvard University and from U. S. Office of Education. Project S-085.

Agency: Harvard University, Graduate School of Education, under sponsorship of U. S. Office of Education.

Previous Digest Report: None.

Research Problem. (1) Determine the relationship between the extension of formal education in Massachusetts from 1830 to 1865 and the concurrent social, economic, intellectual and political changes, particularly those associated with the rapid growth of cities and towns. (2) Abstract from the Massachusetts experience hypotheses concerning the effects of urban-industrial development upon systems of education and, eventually, to test these hypotheses through comparative historical study.

Method of Study. An eclectic combination of the study of ideology, local and institutional history, and statistical analysis. Relations between economic and educational statistics were studied through factor analysis. Statistics in manuscript censuses were used to determine the social position of voters on an important issue in one town and to study the social composition of some high schools. Three communities and the state reform school were studied in depth. Research also relied heavily on educational periodicals of the time, school reports from local communities, Board of Education reports, and miscellaneous primary and secondary sources.

Major Findings. Educational reform was sponsored by a coalition of the social and financial elite of the state, status-anxious middle class parents and status-hungry educators. This coalition imposed reform upon a skeptical, uncomprehending and sometimes hostile citizenry. The motives of each element in the reform coalition varied, but there was little of the humane or democratic in them. One consequence of this rapid and forced imposition of reform was the beginning of that estrangement between the culture of the school and the life of the working class community that poses so great a challenge to reformers of today.

The prime weapon of the reformers was an often implausible and sometimes logically contradictory ideology that stressed education as the road to social and individual salvation. This ideology was diffused throughout the state and elevated into an almost sacred dogma. The emotional commitment of educators to an implausible and unrealistic ideology, coupled with their growing command of community resources, set the stage for their retreat into the rigid, sterile, and isolated bureaucracies that came to mark urban education in the latter nineteenth century. Moreover, the widespread attachment to the ideology of educational reform obscured the depth of social problems and prevented the formulation of realistic strategies of social reform. Because the movement for reform took place amidst a remarkable spurt of industrial and urban growth, this study is partly an investigation of the relationship between education and social development. It is, moreover, the study of the making of the urban school because reforms were most often and most quickly adopted in the communities undergoing the sharpest and most rapid transformation. (MBK)

37. PARALLEL CULTURAL EVOLUTION IN DIVERSE YUGOSLAV PEASANT AND SMALL URBAN COMMUNITIES

Main Investigator: Joel M. Halpern.

Status of Research and Publications: Research completed. Materials undergoing computer analysis.

Agency: Harvard University, Russian Research Center, supported by National Science Foundation.

Previous Digest Report: None.

Research Problem. To seek new perspectives on the processes of convergent cultural evolution and urbanization. A major aim is to seek to understand the impact of programs of centralized planning on culturally and ecologically diverse communities whose differences have considerable historical depth. Key considerations are occupational and residential mobility with increasing intellectual orientation along a rural-urban dimension.

Previous Relevant Research. Field work was carried out for sixteen months in 1961-62 and four months in 1964 to determine the extent to which the individual concept of nationality within Yugoslavia has been changed by the process of communist industrialization and the degree to which historically-derived objective cultural differences have continued to persist.

Method of Study. Communities in the study include some near developing industrial centers and others in isolated regions. Most have a population of about 2,000. All available data on local history were collected, archival sources searched, and interviews obtained with older villagers. Records of town, village, and school were utilized and all available registry statistics collected. Ethnological data were obtained on crisis rites, annual, agricultural and life cycles, and on changes in these patterns. Intensive interviews were conducted with a total of 380 households representing pre-selected segments of the population of each community. This was done with a detailed questionnaire which was modified for each village to suit the greatly varying local conditions. District and village officials were also interviewed. Participating Yugoslav students, originally from rural areas in Bosnia, Montenegro and Macedonia, wrote descriptive analyses of their native communities and autobiographical accounts of their own changes in status. Valuable demographic materials were obtained from the Yugoslav Federal Statistical Bureau. For each of the twelve villages and two small urban centers studied, complete census data for 1961 and 1953 (plus 1948 and 1931 in some cases) were obtained. For some 50,000 individuals there is data on relationship to head of household, sex, age, marital status, education, occupation, nationality, place of birth, and date of arrival at present place of residence, all being supplemental to information collected via interviews and participant-observer methods. In addition to data from ethnically homogenous Slovene, Croat, Serb, Dalmatian, Bosnian, Macedonian, and Albanian villages, there are materials from a large village-town in the Vojvodina, where people from all parts of Yugoslavia were resettled after World War II. (JMH)

38. THE ECONOMICS OF WATER SUPPLY AND QUALITY

Main Investigators: Robert Dorfman, Harold A. Thomas, Henry D. Jacoby.

Status of Research and Publications: In process.

Agency: Harvard University, Water Program, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To develop improved methods of planning water resource developments in situations where municipal and industrial water supply and pollution problems are significant.

Method of Study. (1) Construction of functions which reflect the losses and benefits associated with various levels of flow augmentation for pollution abatement. (2) Development of similar economic relations for municipal and industrial water supply. (3) Incorporation of these new functions into a simulation model of the Delaware River basin, and testing of system development plans under alternative regional growth patterns and under variations in water supply and pollution management policy. (RD)

39. STUDIES IN ENVIRONMENTAL GEOLOGY IN NORTHEASTERN ILLINOIS

Main Investigators: James E. Hackett, George M. Hughes, Ronald A. Landon, Jean I. Larsen.

Status of Research and Publications: A continuing project begun in 1962.

Agency: State of Illinois, Geological Survey.

Previous Digest Report: None.

Research Problem. Application of geologic data to a diversity of areal planning and development problems created by growth of a metropolitan region.

Method of Study. Included in the program are studies of hydrogeology, topography, physiography, the engineering properties of earth materials, and characteristics and distribution of potential mineral resources.

Major Findings. Geologic information is applicable to a broad range of activities, including construction of buildings, transportation, and utility facilities; development and management of water and mineral resources; safe disposal of wastes; and land-use planning. Environmental geology studies already completed have considered geologic conditions relative to open-space planning in DuPage County; geologic factors affecting refuse disposal in Winnebago County; the geology of the Chain-O-Lakes region in Lake and McHenry Counties; and the ground-water geology of Schaumburg Township, Cook County. (JIL)

40. URBAN INFLUENCES ON PRECIPITATION

Main Investigator: Stanley A. Changnon, Jr.

Status of Research and Publications: In process.

Agency: State of Illinois, Water Survey Division.

Previous Digest Report: None.

Research Problem. To study the possible influence of urban or other man-made conditions on precipitation. (SAC)

41. THE LANGUAGE OF PLANNING

Main Investigator: Albert Z. Guttenberg.

Status of Research and Publications: In process. Publication of a monograph anticipated. Certain concepts related to this subject appear in report entitled "New Directions in Land Classification" (see Item 2 above).

Agency: University of Illinois, Bureau of Community Planning and Department of Urban Planning.

Previous Digest Report: None.

Research Problem. To study the structure and dynamics of city planning from the standpoint of its language and literature; to explore the possibilities of a stable technical language for city planning. The research is proceeding in connection with a seminar entitled "The Language of Planning," being offered by the investigator in the Department of Urban Planning, University of Illinois. (AZG)

42. STATEWIDE ECONOMIC STUDY FOR ILLINOIS

Main Investigators: John Allen, Ruth Birdzell, Robert Ferber, Neil Ford, Eleanor Gilpatrick, Kalman Goldberg, Jeffery Green, David Luck, Hugh Nourse, and Jane Shusky.

Status of Research and Publications: County income estimates for 1950-1963 are completed, and projections to the year 2010 are currently being prepared. Estimates of production, services, and population distributions are in process, as is the work on the various other subprojects. A study of "population forecasts" has been added (see Item 112 below). Most of the work should be completed by July, 1966.

Agency: University of Illinois, Bureau of Economic and Business Research, under sponsorship of Illinois Department of Business and Economic Development, and U. S. Department of Housing and Urban Development.

Previous Digest Report: 12:1-58.

Research Problem. Economic analysis underlying preparation of a long-range economic plan for the state of Illinois. (RF)

43. IMPROVING BUS PATRONAGE IN MEDIUM-SIZE CITIES

Main Investigator: Michael A. S. Blurton.

Status of Research and Publications: In process. Report titled "Evaluation of the Potential Number of Bus Transit Riders in Medium-Size Cities" to be published as part of larger report. Completion of final report expected July, 1966.

Agency: University of Illinois, Bureau of Economic and Business Research, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: 12:1-59.

Research Problem. Improving the future potential of bus transit in medium-sized cities. The sub-project, currently in process, is to determine the potential number of bus transit riders.

Method of Study. The sub-project is being conducted in Peoria, Illinois. The study includes only those trips occurring between the central business district of Peoria or Caterpillar Tractor Company in East Peoria and the built-up areas of Peoria and East Peoria, during peak hours of movement. This study will use the actual increases in transit usage obtained with new services which have been operated for one year. These figures will be analyzed and projected in an attempt to determine both realistic actual growth under present conditions and theoretical potential growth in a biased environment.

The potential number of bus transit riders will be determined in this manner: (1) Determination of zonal interchange from the 1964 Peoria home interview origin-and-destination survey. (2) Determination of the percentage of people working fixed hours and not needing a car in their work (defined as the potential bus riders) from a survey conducted by TRIP (Transit Ridership Improvement Program). Other potential riders will be evaluated by correlating percentages of other purpose trips with percentage of work trips. (3) Application of the percentages determined in (2) to the interchange volumes of (1) to estimate the number of potential trips. (4) Correlation of the potential trip volumes with the effect they would have on traffic flow if they would become actual bus ridership volumes. (5) Estimation of the economic effects of potential bus trip volumes becoming actual trip volumes. (6) Repetition of the above for a future design year (e.g., 1980). (MASB)

44. AGRICULTURAL MARKET PLANNING AND EDUCATION IN RESOURCE DEVELOPMENT PROGRAMS

Main Investigator: Lowell D. Hill, Assistant Professor of Agricultural Economics.

Status of Research and Publications: First manuscript, describing alternative techniques and presenting a systematic approach to market planning for resource development, to be published fall, 1965. Second manuscript, illustrating the techniques in an eight county region of southern Illinois, to be published early 1966.

Agency: University of Illinois, Department of Agricultural Economics, under sponsorship of U. S. Department of Agriculture, Extension Service.

Previous Digest Report: None.

Research Problem. In planning for economic development the organization of the marketing system should assume an important role--not a passive one in which it accepts the commodities that are produced and disposes of them at market-clearing prices, but an active role in which it influences the kinds and quantities of production by virtue of its structure and its ability to reflect the desires of consumers back to producers. Such a marketing system is a dynamic institution permitting growth, structural adjustments, and increased operational efficiency where such changes will contribute to economic development of a community. It is toward development of this kind of marketing system that the tools and techniques of this study are directed.

It is recognized that research facilities may vary and that techniques appropriate for one situation may not be applicable in another. For this reason, alternative techniques have been presented ranging from computer programming to simple graphic analysis. It is not anticipated that all the methods will be used for any one problem situation, for the problem may be formulated with many alternative specifications. The material is divided into sequential steps which include (1) selecting a viable region for economic planning and development, (2) selecting a commodity for detailed analysis, (3) identifying specialty commodities, (4) analysis of the market system, (5) economic relationships in production and marketing, (6) evaluating market performance, (7) planning an improved market system, and (8) techniques for implementing regional development plans. A companion publication illustrates the approach and appropriate techniques by selecting an eight county region in southern Illinois, developing a plan for improving the market system, and describing the process of implementing this plan. (LH)

45. INTERRELATIONS BETWEEN U. S. MANPOWER MOVEMENTS AND REGIONAL ECONOMIC CHANGE SINCE 1950

Main Investigator: George J. Stolnitz.

Status of Research and Publications: One-third to one-half complete. Results to be reported in several article-length publications and a book on Recent American Manpower Movements.

Agency: Indiana University, Department of Economics, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. A study of in-movements and out-movements of manpower, separately and in addition to net movements, to ascertain their distinct determinants and structure; the degree of labor-market interchangeability of in-movers and out-movers, to distinguish some main sources of frictional unemployment more closely than is possible with other data; and the interrelations between manpower and total population movements under changing industrial composition of regions. Such interrelations are presumed by regional analysis to be close but are rarely examined for actual patterns. Involved here, too, is the question of the residentiary impacts of manpower and associated population movements. The sex-age-color components of aggregate labor-force movements should, it is hypothesized, have differential impacts, as should their industrial and regional origins. Considerable attention is devoted to evaluating prospective uses of "manpower input-output" matrices for projections, starting with national or regional projections of industrial outputs.

Method of Study. Project centers upon the development of a series of "From-To" manpower tables, similar to input-output matrices for commodities, in which the U. S. labor force is cross-classified by source region and industry against destination region and industry. The manpower matrices are for one or more recent periods and will have sex-age-color detail in addition to aggregate information. In addition to their specific uses in the project, these matrices also serve as a basis for developing a comprehensive, integrated, and multipurpose system of regional manpower accounts, to be associated with output and capital assets accounts. (GJS)

46. ADVANCE ACQUISITION OF LAND BY PUBLIC BODIES FOR PUBLIC IMPROVEMENT

Main Investigators: Ruth Mack, Howard N. Mantel and Donald Shoup.

Status of Research and Publications: In process. Completion expected late 1966.

Agency: Institute of Public Administration, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. To examine and analyze legal techniques involved in advance acquisition of land for public improvements, experiences of a sampling of communities which have acquired land in advance, estimated savings realized through advance acquisition, and the effect of such acquisition upon the orderly planning and development of public improvement.

Method of Study. Examine: (1) the types of public uses for land acquired in advance, including projected time of permanent use and any temporary use; (2) economic costs, foregone taxes, and opportunity costs, such as withholding land and funds from other purposes; (3) economic benefits, such as appreciation of land values and return on temporary uses; (4) local government organizational channels and authority by which decisions and actions affecting advance acquisition are taken; (5) interrelationships of local agencies actually or potentially involved in advance land acquisition; (6) underlying historical, political, and other relevant factors; (7) the relative desirability under different circumstances of advance land acquisition or alternative public influences on land, such as comprehensive planning, zoning, subdivision control, and official mapping. (HNM and MJS)

47. PLANNING ON UNCERTAINTY

Main Investigator: Ruth P. Mack.

Status of Research: Research completed, book in preparation.

Agency: Institute of Public Administration (New York), under sponsorship of Resources for the Future, Inc.

Previous Digest Report: 11:1-39.

Research Problem. The book concerns the impact of uncertainty on governmental decisions and administrative problems. It starts with statistical decision theory and progressively broadens the treatment of probability to encompass uncertainty as it appears in the diffuse environment of governmental decision and administrative action. A wide variety of ways of coping with uncertainty (in the sense of reducing its costs, broadly conceived) are discussed. They cover decisions, themselves, and post-decision behavior. (RPM)

48. LOW INCOME HOUSING DEMONSTRATION

Main Investigators: Justin Gray, Ruth P. Mack, and Thelma Palmerio.

Status of Research and Publications: Project commenced June, 1965; demonstration structures have been acquired; research on development of rehabilitation system and auditing system has been initiated; exploration of relationships with unions, building department, and tenants is in process.

Agency: Institute of Public Administration (New York), under sponsorship of the U. S. Department of Housing and Urban Development, in conjunction with T. Y. Lin & Associates, structural engineers, and the Haussamen Foundation.

Previous Digest Report: None.

Research Problem. Testing and evaluating a new system for rehabilitating New York City's "old law" tenements (approximately 42,000 structures with about 350,000 dwelling units, housing an estimated 1,000,000 people) through the use of advanced engineering techniques. The rehabilitation system to be tested involves the use of preassembled components, which are lowered by cranes through vertical ports cut through the roof and floors. Projected time for the rehabilitation of a typical five-story, twenty-dwelling unit structure is between 48 and 72 hours. This short time period will eliminate one of the main problems in any attempt to renovate a deteriorated living environment, tenant relocation. An emphasis of the evaluation will be on the applicability of this rehabilitation system to the unrehabilitated housing stock in New York City. Studies will be made of the costs involved and benefits to be derived from a widespread application of the principles established as a result of the demonstration. (LCF)

49. URBAN STORM RUNOFF

Main Investigator: John C. Geyer.

Status of Research and Publications: In process.

Agency: John Hopkins University, Department of Sanitary Engineering and Water Resources, under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. To develop improved methods of estimating runoff for use in designing storm drain systems for urban areas.

Method of Study. (1) Measurement and analysis of rainfall and runoff on selected urban areas in Baltimore, Maryland. (2) Analysis of the economics of storm drain systems. (JCG)

50. WATER USE IN RESIDENTIAL AREAS

Main Investigators: John C. Geyer and F. Pierce Linaweaver, Jr

Status of Research and Publications: In process.

Agency: Johns Hopkins University, Department of Sanitary Engineering and Water Resources, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem. To investigate the rates of use of municipal water in housing areas of all types and income levels for the purpose of developing and recommending rational design criteria for urban water distribution systems.

Method of Study. Eleven municipalities throughout the United States are cooperating by installing and operating meter and punch tape recorders in some 40 residential areas. All tapes are forwarded to the project for translation to cards and machine analysis to study the interrelationships of water use rates and variables such as climate, income, charges for water, lot size, etc. (JCG)

51. CHICAGO'S POWER TO LICENSE AND REGULATE

Main Investigator: Jack M. Siegel.

Status of Research and Publications: Completed. Report published November, 1965, by Loyola University, Chicago, Illinois. 32 pp. \$1.00 per copy.

Agency: Loyola University, Center for Research in Urban Government.

Previous Digest Report: None.

Research Problem. Examine the legal basis of the city's licensing power, distinguish between licensing for regulation and for revenue purposes, delineate the administration of licensing in Chicago, and finally, to suggest methods by which the licensing device can be further refined in order to secure greater benefits for the citizens of the community. (JS)

52. SOCIAL ASPECTS OF URBAN RENEWAL.

Main Investigators: William H. Key, Gardner Murphy, and Edward Greenwood.

Status of Research and Publications: In process.

Agency: Menninger Foundation, under sponsorship of U. S. Social Security Administration.

Previous Digest Report: None.

Research Problem. A research and demonstration project to investigate the effect of forced relocation on the lives of individuals, and to test the hypothesis that the provision of a systematic, planned counseling program will significantly reduce the deleterious effects of such forced mobility.

Method of Study. The project will study and compare, over a period of five years, the following groups: approximately 2,000 individuals displaced by an urban renewal program; 200 individuals displaced by an Interstate Highway 70 project; 100 individuals who do not move; 100 individuals who move voluntarily. The entire urban renewal population will have available a program of planned counseling. A sample of the urban renewal group will be studied

intensively by a therapeutic team, and, where appropriate, psychotherapy will be offered. The basic design is a before-and-after study, utilizing control groups. Data will be gathered before relocation and two and four years later. Each group will be compared with itself and the control groups. (WHK)

53. MIAMI CONCERTED SERVICES BASELINE STUDY

Main Investigators: Aaron Lipman, Kenneth J. Smith, and Marguerite B. Hay.

Status of Research and Publications: Data gathering nearly complete. Preliminary analysis underway. Two papers have been delivered, "Loss of Status in Retirement," presented at 17th Annual Meeting of Gerontological Society; "Race, Education, and Preparation for Death in Old Age," presented at 18th Annual Meeting of Gerontological Society. Future publication expected in form of papers, articles and possibly a monograph.

Agency: University of Miami, Department of Sociology and Anthropology, under sponsorship of U. S. Welfare Administration.

Previous Digest Report: None.

Research Problem. To measure ability of social services to reverse dependent behavior among the aged: assess empirically at a high level of reliability the needs of older persons; assemble baseline data on residents of public housing age 62 and over and on health and welfare services available to them; develop guidelines for expanding and coordinating pertinent services in order to facilitate better utilization of the resources available through federal, state, and private agencies in the effort to meet the needs of these people.

Method of Study. Data were gathered by interviews with 661 residents of public housing and 104 matched non-residents. Interview schedule consisted of the usual background data as well as certain basic attitude scales, some published, some developed by the research team. Special emphasis was placed on questions designed to elicit the needs which older people find most pressing. Respondents were also asked to evaluate their present situation and indicate their degree of satisfaction with the housing project in which they live. Finally, the respondents were asked which services they currently use and how well these services fulfill their needs. With final analysis of the data, we hope to submit concrete evidence concerning perceived needs for services so that when new services are introduced we can determine where they should be instituted, how they may need to be modified and whether they are likely to lead to dependency or autonomous behavior on the part of the respondent. (MBH)

54. OPERATIONAL ASPECTS OF ONE-WAY AND TWO-WAY STREETS

Main Investigator: Not reported.

Status of Research and Publications: A six-year study, in process.

Agency: Michigan State Highway Department, under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. To measure quantitatively the type and degree of improved operation realized when a facility is changed from two-way operation to one-way operation.

Method of Study. Traffic volume, turning-movement, speed and delay, and tap surveys have been completed to record the "before" conditions in the cities of Lansing, Kalamazoo, Pontiac, and Port Huron, where trunkline improvements were planned involving changes from two-way to one-way traffic operation. "After" survey are scheduled to be taken at three cities in the summer of 1966. (HHC)

55. M.E.T.R.O. (MICHIGAN EFFECTUATION, TRAINING, AND RESEARCH OPERATION) PROJECT

Main Investigator: Richard D. Duke.

Status of Research and Publications: Phase I of three phases to be completed by the end of 1965. During the course of Phase I, the conceptual model for the operational gaming instrument has been developed. A flow chart which outlines the basic framework to be elaborated upon during Phase II will be published in an interim report, along with the results of several related studies.

Agency: Michigan State University, University of Michigan, and Tri-County Regional Planning Commission, under sponsorship of U. S. Department of Housing and Urban Development.

Previous Digest Report: 12:1-70. (RDD)

56. RAINFALL-RUNOFF RELATIONS ON URBAN AND RURAL AREAS

Main Investigator: E. F. Brater.

Status of Research and Publications: In process.

Agency: University of Michigan, Department of Civil Engineering, under sponsorship of U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. To determine significant relationships between rainfall, flood discharge, and watershed characteristics for the purpose of developing procedures for predicting floods.

Method of Study. The rainfall and runoff for 27 small watersheds (8 to 800 square miles) located in southeastern Michigan will be studied. Some of the watersheds are completely urban, some rural, and some in the process of being urbanized. Two aspects of the runoff process will be investigated: (1) factors which establish what portion of a given rain will become surface runoff, and (2) the shape and timing of the runoff hydrograph. The amount of water lost to infiltration and permanent storage during a rainstorm will be related to such factors as land use, type of soil, vegetative cover, antecedent precipitation, and season of the year, in an effort to find significant correlations. Parameters which characterize the form of the runoff hydrographs will be studied to determine their dependence on rainfall and watershed characteristics. Some watersheds from other localities will also be investigated to provide a more general test of the procedures which are developed. (EFB)

57. LIVING PATTERNS OF SENIOR CITIZENS FOLLOWING RELOCATION

Main Investigator: Betty J. Havens.

Status of Research and Publications: Research completed. One aspect published as thesis for University of Wisconsin (Milwaukee), An Investigation of the Relationship between Activity Patterns and Adjustment in a Non-Institutional, Residential, Aged Population. Further publication anticipated.

Agency: Milwaukee Council on the Aging in co-operation with the Milwaukee Public Housing Authority and the United Community Services Committee on Aging, the Convent Hill Program Committee, Milwaukee Vocational Technical and Adult Schools, and the residents of Convent Hill.

Previous Digest Report: None.

Research Problem. What factors in the lives of relocated, aged adults prior to, during, and following involuntary but non-forced relocation contributed to their level of adjustment. While data were gathered on many potentially influencing factors, such as physical facilities, health, finances, and retirement the final stages of research focused on activity patterns as being most relevant.

Previous Relevant Research. Large body of gerontological literature, especially studies of Neugarten, Havighurst, and Tobin on Life Satisfaction; of Rosow on Continuity and Discontinuity of Activities and of Phillips on Role Theory.

Hypotheses. (1) A high level of adjustment will be associated with continuing of more activities; with few activities being substituted, added, or discontinued during and following relocation;

(2) a medium level of adjustment will be associated with substituting of more activities; with few activities being continued, added or discontinued during and following relocation; (3) a medium level of adjustment will be associated with adding of more activities; with few activities being continued, substituted, or discontinued following relocation; (4) a low level of adjustment will be associated with the discontinuing of more activities; with few activities being continued, substituted, or added during and following relocation.

Method of Study. Gathering of data relative to activity patterns of participation and adjustment, as measured by Life Satisfaction Rating Scales and Socialness Scale, for periods prior to, during, and following relocation of a sample of occupants in a public housing project for the elderly in Milwaukee from 1962 through 1965.

Major Findings. (1) Hypothesis 3 could not be tested; (2) hypotheses 1, 2, 4, were supported by the data with the second hypothesis being least conclusive; (3) demonstration of a marked positive correlation ($\gamma = .75$) between the Socialness Scale Ratings and the Life Satisfaction Ratings; (4) support for the situational premise; affect and effect of the situation tend to influence adjustment during and stabilize following relocation, as indicated by increased adjustment for the continuers and substituters and decreased adjustment for the discontinuer following as opposed to during relocation; (5) support of the continuity premise rather than sheer quantity of participation as relative to adjustment. Some activity patterns closely associated with adjustment other than suggested variables also identified. (BJH)

58. ECONOMIC PROBLEMS IN THE USE, ALLOCATION, REGULATION, AND PRICING OF WATER

Main Investigator: Philip M. Raup.

Status of Research and Publications: In process.

Agency: University of Minnesota, Agricultural Experiment Station, under sponsorship of U. S. Cooperative State Experiment Station Service.

Previous Digest Report: None.

Research Problem. (1) To estimate current and future supply and demand for water for agriculture and competing uses. (2) To explore economic consequences of existing laws and doctrine. (3) To examine economic issues involved in competition for water among agricultural, recreational, municipal, and industrial uses. (4) To appraise alternative forms of organization for conservation, use, and regulation of water resources. (5) To study data bearing on conflicts between public and private rights in control over water resources.

Method of Study. Determine supply and demand for water in Minnesota; test the adequacy and evaluate the method of current legislation regulating permits by Division of Waters and Department of Conservation; examine conflict between public and private interests, and ownership rights; determine cost of development, division of costs and benefits among users, and delineation of public and private interests. Detailed research procedures and research, itself, will be developed and conducted jointly by economists, law students, and professors. After two years, research will be coordinated with neighboring states making similar investigations to obtain maximum value. (PMR)

59. SOILS OF THE TWIN CITIES METROPOLITAN AREA AND THEIR RELATIONSHIP TO URBAN DEVELOPMENT

Main Investigators: Lowell D. Hanson, Clement D. Springer, Rouse Farnham, Alex Robertson, and Evan Allred.

Status of Research and Publications: Completed. Published as Extension Bulletin No. 320, December, 1965. 40 pp. Single copies available free from Bulletin Room, Minnesota Agricultural Extension Service, University of Minnesota, Saint Paul, Minnesota 55101.

Agency: University of Minnesota, Minnesota Agricultural Extension Service, in cooperation with Twin Cities Metropolitan Planning Commission and U. S. Department of Agriculture.

Previous Digest Report: None.

Research Problem. Interpret existing soil surveys; group soil types with similar characteristics into categories for urban land use purposes; relate characteristics of the soils to specific problems associated with urban development

Hypothesis. That a relationship between soil characteristics and urban development exists.

Method of Study. Interviewed developers and engineers, and formulated a list of problems related to soils that are encountered in the urban development process (with emphasis on residential). With identified problems in mind, interpreted the physical description of soils developed for U. S. Department of Agriculture soil surveys and grouped the many soil types into eight major groups. Report includes a map of the 2,000 square mile area with the eight groups shown in full color. Study evaluates the suitability of the eight groups for various urban purposes. Some analysis is made of the impact that soils will have on the geographic pattern of future development. (CDS)

60. SOCIAL AND CULTURAL FACTORS AND PROCESSES ASSOCIATED WITH SOCIAL CHANGES OCCURRING IN MISSOURI TRADE-CENTER COMMUNITIES

Main Investigator: Daryl Hobbs.

Status of Research and Publications: In process.

Agency: University of Missouri, Agricultural Experiment Station, under sponsorship of U. S. Cooperative State Experiment Station Service.

Previous Digest Report: None.

Research Problem. To determine (1) what community directed changes are undertaken by trade-center communities of different sizes and types; (2) whether similar types of communities have followed consistent patterns of undertaking community changes; (3) the economic, social and other situational factors associated with the initiation of community changes, and with their successful and unsuccessful completion; (4) the social processes associated with the successful completion of community changes.

Method of Study. Selection of sample communities from a functional classification of Missouri trade-centers under 2,500 population, possessing varying population trend categories. The historical development of the demographic, ecological and social, economic, and political organization of these communities will be studied. Population trends will be related to the economic and social characteristics. Second phase will be concerned with identifying and analyzing the social processes used by communities to implement change. A social action construct will be used as a frame of reference for the analysis. (DH)

61. FACTORS AFFECTING RESOURCE USE AND INCOME POTENTIAL IN OZARKS OF MISSOURI

Main Investigators: Ronald Bird and Frank Miller.

Status of Research and Publications: Aggregate analysis of economic potential of recreation, forestry, and agricultural resources nearing completion. Six bulletins on recreation, two on agriculture, and one on forestry have been published. A research bulletin on agricultural adjustments is being completed.

Agency: University of Missouri, Department of Agricultural Economics, under sponsorship of U. S. Department of Agriculture, Economic Development Division.

Previous Digest Report: None.

Research Problem. The chronic conditions of low family income existing among rural residents in the Ozarks of Missouri.

Previous Relevant Research. "Resources and Levels of Income of Farm and Rural Nonfarm Households in Eastern Ozark Area of Missouri," University of Missouri Agricultural Experiment Station Research Bulletin 661, March, 1958; "Profitable Adjustments on Farms in Eastern Ozarks of Missouri," University of Missouri, Agricultural Experiment Station Research Bulletin 745, July, 1960.

Hypothesis. If impediments to the adjustments of human resources to natural resources are removed, higher incomes will result to human resources.

Method of Study. The opportunity for enlarging the economic base of the Missouri Ozarks by aggregating its economic potential, industry by industry, and by area, is being evaluated. Trends in resource adjustment for each industry are analyzed, and the adjustments that are being made toward a more competitive model are projected.

Major Findings. (1) In 1960, the wood-using industry in Ozark Area produced products valued at \$50.6 million and employed 14,000 workers with a total payroll of \$20.6 million. By 1975, it is estimated the gross value of timber products will be \$60.8 million with a total payroll of \$24.8 million. Total fulltime employment will be about the same as in 1960. (2) In 1960, tourists spent \$72 million, and employment was provided for 8,800 workers. By 1975, it is expected that tourists will spend \$160 million in the area and provide employment for as many workers as the wood-using industry. (3) The livestock enterprises best adapted to the area are beef cow-calf, dairy, feeder pig and pig farrow-fattening. If these enterprises were expanded and land use were adjusted to the crops most suitable for the area, gross farm sales could be increased from \$180 million in 1959 to \$248 million in 1975, and net returns from \$54 million to \$77 million. If the land resources were distributed equitably, and each farmer operated with medium efficiency on the enterprise best adapted to his farm, in order for each farmer to receive a net return of \$3,000, the number of farms would have to be reduced from 54,000 to 26,000. This is about the same reduction in numbers that occurred from 1950 to 1959. (RB)

62. UPPER MISSISSIPPI RIVER BASIN, ECONOMIC BASE STUDY

Main Investigators: Louis H. Stern and George Novak.

Status of Research and Publications: Data collection and preliminary analysis completed. Three technical reports on the delineation of economic subregions and data collection have been issued.

Agency: National Planning Association under contract with U. S. Corps of Engineers, North Central Division.

Previous Digest Report: 12:1-78. (LHS)

63. SUSQUEHANNA RIVER AND CHESAPEAKE BAY BASIN, ECONOMIC BASE STUDY

Main Investigators: Louis H. Stern and Vincent Arkell.

Status of Research and Publications: Final report completed.

Agency: National Planning Association, under contract with U. S. Public Health Service, Region III and U. S. Corps of Engineers, Baltimore District.

Previous Digest Report: 10:1-49; 12:1-77. (LHS)

64. REGIONAL ECONOMIC PROJECTION SERIES

Main Investigators: Sidney Sonenblum and Ahmad Al-Samarrie.

Status of Research and Publications: Last of three publications completed, "State Detailed Industry Employment, Output and Income Projected to 1975."

Agency: National Planning Association.

Previous Digest Report: 9:2-56; 10:1-38; 10:2-48; 11:1-57; 11:2-73; 12:1-76. (MK)

65. METROPOLITAN ECONOMIC PROJECTION SERIES

Main Investigators: Sidney Sonenblum, Mannie Kupinsky and Joe Won Lee.

Status of Research and Publications: First publication, giving historical data for 215 SMSA's now available. (Metropolitan Area Industry Employment and Population Estimates, 1950, 1957, 1960, 1962. National Planning Association, 1606 New Hampshire Avenue, N. W. Washington, D. C. 20009 360 pp. \$40 per copy). Second publication, giving projections of industry employment, output, population and personal income for fifteen metropolitan economies to be printed November 1965. It will be available to subscribers to NPA's Regional Economic Projection Series. Projections for about 80 additional metropolitan areas in process.

Agency: National Planning Association.

Previous Digest Report: 10:2-47; 11:1-56; 11:2-72; 12:1-75. (MK)

66. FACTORS RELATED TO HOUSING IN RAPIDLY GROWING URBAN-RURAL FRINGE AREAS

Main Investigators: Glenn H. Beyer, Myron H. Levenson, and Sylvia G. Wahl.

Status of Research and Publications: In process.

Agency: New York State College of Home Economics, Department of Housing and Design; in cooperation with Cornell University, Department of City and Regional Planning, through Center for Housing and Environmental Studies.

Previous Digest Report: None.

Research Problem. To study problems arising from rapid expansion in peripheries of urban areas.

Method of Study. Three urban-rural fringe areas outside cities in Upstate New York (Buffalo, Rochester and Syracuse) were selected for study because they represent successive levels of development. Data, obtained by interviews with a sample of home owners representing different types of populations (i.e., farm, village, and new development residents), include attitudes toward certain conditions of life, opinions of local institutional structures, measurements of social interaction and institutional participation, perception of local issues considered important, and demographic characteristics.

Hypotheses. (1) Selective migration underlies settlement of movers who purchase single-family residences in new subdivisions or other clusters of new housing units in the urban-rural fringe. (2) Differences in activities and attitudes among the populations of different urban-rural fringe communities are related to extent of development of the communities involved. (3) Fringe populations vary in social structure, values, activities, and attitudes according to position in the fringe, social class level, stage in family life cycle, degree of residential stability, and community orientation. (GHB)

67. EVALUATION OF THE TOWN FORM OF GOVERNMENT IN MASSACHUSETTS, A 17th CENTURY INSTITUTION

Main Investigator: Joseph F. Zimmerman.

Status of Research and Publications: Book in preparation. Several articles published, including "Limitations on Cities and Towns under Home Rule," Chapter 2, Monograph 2, Community Analysis and Action Series, Bureau of Public Affairs, Boston College, February, 1965.

Agency: State University of New York, Graduate School of Public Affairs

Previous Digest Report: None. (JFZ)

68. REGIONAL COMPREHENSIVE MULTI-PURPOSE WATER RESOURCES PLANNING

Main Investigators: H. G. Wilm, F. W. Montanari, and N. L. Barbarossa.

Status of Research and Publications: At present, two regions are under study. The Erie-Niagara Basin investigation began in 1963 and will be completed in 1968. The Upper Seneca River Basin Study began in 1964 and will be completed in 1969.

Agency: New York State Water Resources Commission in cooperation with regional boards and federal, state, and local agencies. The Commission is composed of the heads of six state departments: Conservation, Agriculture and Markets, Commerce, Health, Law, and Public Works. A non-salaried seven-man Board, composed of local leaders, appointed by the Water Resources Commission, is responsible for the conduct of the study and evolving comprehensive plans for development in each region.

Previous Digest Report: None.

Research Problem. An inventory of the water resources, quantity and quality, of the basin under investigation; an assessment of present needs (including recreation, irrigation, public water supply, low flow augmentation, fish and wildlife, power, navigation, etc.) in terms of water resources development; a projection of future needs and identification of means and preparation of plans for meeting them.

Method of Study. An economic base study is made to determine the present economic make-up of the area and to make the necessary projections of population growth, industrial change, etc. Hydrologic and economic information are obtained from analysis of existing data and intensive data collection using field observations, interviews, and mail questionnaires. (FWM)

69. RELATION OF AREA POPULATION ADJUSTMENT TO ECONOMIC ACTIVITY

Main Investigator: G. S. Tolley.

Status of Research and Publications: In process.

Agency: University of North Carolina, Agricultural Experiment Station, State of North Carolina.

Previous Digest Report: None.

Research Problem. To develop a method of projecting population for an area, consistent with analyses of its future production and employment. Labor supply-demand models are to be constructed.

Method of Study. The first year will be devoted to study of labor supply behavior, concentrating on geographical cross-section analysis of migration and labor force participation. The second year, one or more areas will be chosen for intensive study. The additional considerations necessary to complete the project model will be introduced, and 10-year population projections made. (GST)

70. ENVIRONMENTAL ENGINEERING POLICIES AND URBAN DEVELOPMENT

Main Investigators: F. Stuart Chapin, Jr., and Shirley F. Weiss.

Status of Research and Publications: In process.

Agency: University of North Carolina, under sponsorship of U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. (1) To examine and describe the range of environmental engineering concepts and controls that tend to inhibit or encourage urban land development. (2) To test out in an experimental model the impact of selected environmental engineering policies on urban growth patterns. (3) To translate the findings into specific packages of environmental engineering policies for consideration of alternate forms of urban development, and thereby provide public officials with a more rational basis for making policy choices which have an impact on the direction and intensity of urban growth.

Previous Relevant Research. See Digest reports 11:2-77 and 12:1-33 for related projects. (STU)

71. LEGAL AND ECONOMIC FACTORS OF WATER USE IN NORTH DAKOTA

Main Investigator: Laurel D. Loftsgard.

Status of Research and Publications: In process.

Agency: North Dakota State University, Agricultural Experiment Station, under sponsorship of U. S. Cooperative State Experiment Station Service.

Previous Digest Report: None.

Research Problem. (1) Analyze statutory and case law regulating water use. (2) Determine the duties and powers of functioning districts or associations for governing the rights of agricultural and nonagricultural users of water. (3) Determine possible conflicts between existing and potential users of water. (4) Compare existing legal-institutional arrangements with economic considerations of allocating water among uses and users.

Method of Study. Compilation and analysis of all case and statutory water law in North Dakota. The effectiveness of these laws will be appraised in terms of their feasibility under present economic conditions and compared with water laws in other states. Recommendations for new and revised state legislation regarding water laws will be made, for the purpose of minimizing conflicting interests among uses and users of water. (LDL)

72. BUILDING AND STRUCTURAL ARTS AND CIVIC TECHNOLOGY IN CHICAGO SINCE COLUMBIAN EXPOSITION OF 1893

Main Investigator: Carl W. Condit.

Status of Research and Publications: In process.

Agency: Northwestern University, under sponsorship of American Philosophical Society, Penrose Fund.

Previous Digest Report: None.

Research Problem. To show how in mature civic construction the aesthetic and utilitarian ends of building combine to serve both the material and spiritual needs of human beings.

Method of Study. Project focuses on the development of Chicago in terms of building, planning, and engineering achievements which constitute the physical basis of its organized community life. These elements include architecture, structural technology, civic art and planning, the engineering of transportation, waterway development, and water supply, and their role in maintaining and enhancing the public life of the city. The work may be regarded as the physical and functional biography of a city rather than a social, economic, or institutional history.

The primary reason for choosing Chicago is that Chicago has the greatest building and planning tradition of any American city, and in many respects its contributions give it a unique status among the major cities of the world. Modern architecture, building techniques, and metropolitan planning were created in Chicago. Now, for the second time, the city stands in the front rank of urban America in the building, planning, and civic arts. This achievement has long demanded a comprehensive and synthetic historical study. (CWC)

73. LEGAL INTERVENTIONS, SOCIAL MOBILITY, AND DEPENDENCY--A STUDY OF PUBLIC ASSISTANCE IN HOUSING

Main Investigator: Kiyoshi Ikeda and Douglas S. Yamamura.

Status of Research and Publications: In process.

Agency: Oberlin College, under sponsorship of U. S. Social Security Administration.

Previous Digest Report: None.

Research Problem. To trace the interplay between legal-administrative interventions in family welfare and the behavior of the recipient family in its movement out of dependency status.

Method of Study. Systematic study of the effects of legal interventions in inducing families to plan for and move out of dependency status and in enabling families to control or reduce deviance and dependency within the family; detailed study of the influence of different formulations of housing assistance and subsidy upon family behavior to test the hypothesis that initial conformity to desired values of achievement and mobility are likely to control dependency and deviance within the family. Two cohorts of low-income families (960 families) which differ in achievement-mobility focus and in receipt of housing aid will be studied in terms of mobility-achievement plans, supports, and related organization of family activities and behavior. Field work will be completed in Honolulu, Hawaii. (KI)

74. EFFECT OF AN EXPRESSWAY ON USAGE OF OTHER ELEMENTS OF A STREET SYSTEM

Main Investigator: Not reported.

Status of Research and Publications: In process.

Agency: Ohio State Department of Highways, under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. To determine to what extent the construction of an expressway would affect the system of streets adjoining and connecting the arterial in each of three numerated periods of time with regard to their ability to provide a given level of service. (CRH)

75. COMMUNITY DIMENSIONS STUDY

Main Investigators: Byron E. Munson and Marc Matre.

Status of Research and Publications: In process.

Agency: Ohio State University, Center for Community and Regional Analysis.

Previous Digest Report: None.

Research Problem. To develop models of community change; develop objective indices which reveal the significance, as well as the relationship, of community dimensions.

Method of Study. The 88 Ohio counties will be ranked from 1 to 88 according to 114 community dimensions, such as size, proportion urban, industrialization, crime, delinquency, and mental illness. Raw measures of each dimension will be normalized to facilitate the ranking process. The 88 Ohio counties will be used as a "standard" population of communities to establish norms for each of the community dimensions. Dimensions will be factor analyzed to establish inter-relationships. Trends will be determined through a comparison of rankings in 1950 with those of 1960. (BEM)

76. POPULATION CHANGES IN SOUTHERN TOWNS AND CITIES, WITH SPECIAL REFERENCE TO CHANGES IN FARM TRADE AND SERVICE CENTERS

Main Investigators: James D. Tarver and Calvin L. Beale.

Status of Research and Publications: Compilation of data on population changes for all towns and cities under 10,000 in the South, by selected characteristics, completed. Procedures for statistical analysis have been developed, and some preliminary analytical work has been done. Publication of findings in a report expected in 1966.

Agency: Oklahoma State University, Research Foundation, under sponsorship of U. S. Department of Agriculture, Economic Research Service.

Previous Digest Report: None.

Research Problem. To determine the relative importance of selected independent variables on population changes in small towns and cities in the South from 1950 to 1960.

Method of Study. Data from 1950 and 1960 Censuses of Population were utilized for computing the change in total population of each center in the South. Measures for each of several variables such as county seat status, size of place in 1950, distance from nearest metropolitan center, education, income, industry and/or occupation, subregional location, previous growth rate were developed, based on data from the Censuses of Population and other sources. Using 1950-60 percentage changes in population as the dependent variable, statistical tests were used to measure the importance of the selected independent variables in explaining population changes, and to type the towns by basic functions. (CLB)

77. OPERATIONS RESEARCH IN MINERAL RESOURCE DEVELOPMENT

Main Investigators: J. C. Griffiths, L. J. Drew, J. McDivitt, DeVerle Harris, J. J. Schanz, and D. H. Sellers.

Status of Research and Publications: In process. A progress report on Phase I to be published in forthcoming issue of Operations Research. (A bi-monthly publication, Mount Royal and Guilford Avenue, Baltimore 2, Maryland.)

Agency: Pennsylvania State University, College of Mineral Industries, Departments of Geochemistry and Mineralogy and Mineral Economics, under sponsorship of National Science Foundation.

Previous Digest Report: 12:1-84. (JCG)

78. RECREATIONAL VALUE OF WATER QUALITY: THE DELAWARE ESTUARY--A CASE STUDY

Main Investigators: Paul Davidson, F. Gerard Adams, and Joseph Seneca.

Status of Research and Publications: This project completed. Paper titled "The Social Value of Water Recreation Facilities Resulting From an Improvement In Water Quality In an Estuary: The Delaware--A Case," to be published in Western Resources Papers, 1965, University of Colorado Press. Further research in the area contemplated.

Agency: University of Pennsylvania, Economics Research Services Unit, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: 12:1-85.

Research Problem. An exploratory study to estimate the recreational benefits (swimming, boating, fishing) which would result from improved water quality in the Delaware River Basin.

Method of Study and Major Findings. A theoretical discussion of the sources of "market failure" in providing water recreational facilities was followed by development of an approach bringing together estimates of marginal benefit and marginal cost. Use estimates were made with and without a clean river. Joined with engineering estimates of the capital cost of the project, these estimates developed into a cost-benefit analysis that proposed, on a highly tentative basis, the valuation of a day's use of water recreation facilities which would justify various degrees of water quality improvement.

Empirically, the estimates are on the basis of Michigan Survey Research Center cross-section data. A multi-variate regression analysis found the socio-economic and locational variables which affect swimming, fishing, and boating participation and yielded probability estimates of participation for each sport. The considerably greater dependence of boating participation on the availability of facilities as compared to swimming and fishing was a notable result. Two sets of probability estimates were made for the eleven county Delaware River Basin area--one excluding, where relevant,

the influence of the Delaware River and the other assuming improved water quality. Projections of participation based on population changes and the improved facility and water area conditions through 1990 were obtained. Making alternative assumptions about the dollar value of a day's recreational activity, a series of net benefit curves was derived. Confronting these with tentative cost estimates of the improvements needed for each water quality level, it is possible to derive the value which must be placed on an "activity day" to justify alternative levels of water quality improvement. (FGA)

79. RELOCATION OF ELDERLY PERSONS

Main Investigators: Chester Rapkin, Grace Milgram, and Paul L. Niebanck.

Status of Research and Publications: Two volumes of a series based upon this project now available: Paul L. Niebanck, Essays on the Problems Faced in the Relocation of Elderly Persons, 1964, reported previously, and Paul L. Niebanck, The Elderly in Urban Areas, 1965. Forthcoming volumes will include four in 1966 describing the demonstration projects now nearing completion in Providence, New York, San Antonio, and San Francisco. A concluding volume will submit policy recommendations.

Agency: University of Pennsylvania, Institute for Environmental Studies,* in cooperation with National Association of Housing and Redevelopment Officials.

Previous Digest Report: 9:2-104; 11:1-63; 12:1-90.

Research Problem. Procedures for ameliorating the plight of elderly persons who are relocated because of urban renewal, highway construction, and other governmental programs.

Method of Study. Data on relocation population obtained from Office of Relocation and Community Organization of the Urban Renewal Administration and surveys of 26 local relocation agencies. Information concerning relocation needs of the elderly secured by interviews and questionnaires.

Major Findings. Second publication, The Elderly in Urban Areas, is a comprehensive statement of the conditions under which elderly persons live in the older parts of American cities. Problems of adaptation are cited, and the resources that exist to help them

* Formerly Institute for Urban Studies and Institute for Architectural Research. See below, Brief Mention, p. 103.

achieve and maintain secure and satisfying lives are examined critically. Particular attention is given to housing and relocation. Although many relocation agencies are providing excellent service, negative effects of relocation on the elderly remain. After relocation, elderly persons commonly pay higher rents, often for smaller dwellings; have reduced incomes due to loss of boarders or part-time neighborhood jobs; are deprived of the social and psychological well being provided by the older community. The relocation agencies continue to focus too much attention on housing quality and not enough on the new neighborhood and the important secondary functions which its facilities perform. Other economic, social, and psychological problems are also reviewed. (PLN)

80. LOCATION AND STRUCTURE OF HOUSING DEMAND AND SUPPLY

Main Investigator: Britton Harris.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Institute for Environmental Studies.

Previous Digest Report: None.

Research Problem. To develop models for analyzing patterns of residential locational choice, taking into account housing and transportation conditions, family status, and income.

Method of Study. Use of transportation and locational models, and multivariate statistical analysis. (RTM)

81. HOUSING MARKET AND SKETCH PLANNING STUDIES

Main Investigator: Britton Harris.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, Institute of Environmental Studies.

Previous Digest Report: None.

Research Problem: In conjunction with the above project (Item 80), to undertake a housing market analysis of the New York metropolitan area and develop computerized sketch planning methods, to facilitate the generation of planning alternatives on the basis of policy determinations, preference analyses, and assumptions. (RTM)

82. FINANCIAL RISKS INHERENT IN THE HOME MORTGAGE MARKET

Main Investigators: Chester Rapkin, Grace Milgram, Roger Blood, and Peter Waitneight.

Status of Research and Publications: Completion of study expected by July, 1966. Publication to be issued at a later date.

Agency: University of Pennsylvania, Institute for Environmental Studies,* under sponsorship of Mortgage Guaranty Insurance Corporation.

Previous Digest Report: None.

Research Problem. Financial techniques employed to cope with uncertainties regarding possible losses and the various mortgage guaranty systems that have been established to spread the risks. In particular, the operations of the Mortgage Guaranty Insurance Corporation will be studied and compared with the Mutual Mortgage Insurance Fund of the FHA and other relevant mortgage systems. The analysis of MGIC is intended to serve as a case study of a significant national economic problem. Specifically, the study will cover: (1) Role of mortgage finance in the economy, private long-term debt structure, and home building. (2) Nature of risk in the mortgage market; theory of reserves for losses; trends in delinquency and foreclosure rates; and the analysis of past experience as revealed in studies conducted by National Bureau of Economic Research, HHFA, FHA, Mortgage Bankers Association, and the U. S. Savings and Loan League. (3) History and description of existing mortgage insurance and guaranty operations, including FHA, Veterans Administration, Canadian Experience, and private groups. (4) Development and mode of operation of Mortgage Guaranty Insurance Corporation. (5) Analysis of MGIC's portfolio in order to evaluate the risk exposure; characteristics of insured loans; actuarial comparisons of present value of the future income stream with present value of possible claims based upon alternative assumptions regarding the incidence of foreclosure and loss; foreclosure and delinquency rates for loans referred by approved lending institutions compared with its general experience. (6) Evaluation of the relative merits of alternative methods of coping with risk exposure. (CR)

83. AN INFORMATION SYSTEM FOR HOSPITAL PLANNING

Main Investigator: Charles H. Burnette.

Status of Research and Publications: Testable prototype edition to include 1500 abstracts, a classification index, and a book of sources to be published in January, 1967.

Agency: University of Pennsylvania, Institute for Environmental Studies, under sponsorship of United States Public Health Service.

Previous Digest Report: None.

Research Problem. To develop a comprehensive problem-oriented information structure capable of relating the literature, sources and data to the planning of health facilities. A structure for retrieval has been developed which also assists the searcher to define his quest and its relationship to a formalized sequence of planning. The researcher makes three successive choices of classification, each more specific than the last. He then confronts a list of descriptors which he scans in search of those applicable to his quest. As he scans he may recognize descriptors he had not anticipated which, because they are in a related classification, may be applicable to his needs. All descriptors listed carry access codes to a single record in the file enabling entry of the record under several classifications. This multiple entry is minimized by the formalized planning sequence which services to define where the information would most likely be entered. (CHB)

84. MIGRATION AND URBANIZATION IN THE UNITED STATES

Main Investigators: D. S. Thomas, H. T. Eldridge, and A. R. Miller.

Status of Research and Publications: Fifth report now available, Hope T. Eldridge, Net Intercensal Migration for States and Geographic Divisions of the United States 1950-1960: Methodological and Substantive Aspects, University of Pennsylvania, Population Studies Center, Analytical and Technical Reports, No. 5, Philadelphia, May, 1965.

Agency: University of Pennsylvania, Population Studies Center.

Previous Digest Report: 9:2-109, 12:1-92.

Research Problem. An analysis of estimates of net intercensal migration between 1950 and 1960 for states, based on the census survival ratio method, and of the components of internal migration as measured by area specific survival ratios. In addition, it contains a comparison of results obtained by various methods of estimating intercensal migration. (ARM)

85. EUROPEAN METHODS OF CONTROLLING URBAN EXPANSION

Main Investigator: Ann Louise Strong.

Status of Research and Publications: In process.

Agency: University of Pennsylvania, School of Law.

Previous Digest Report: None.

Research Problem. The specific aims of this study are:
(1) To determine what methods of land use control have been employed in European metropolitan areas to influence the timing and location of urban growth. (2) Consider the advantages and shortcomings of these methods. (3) Evaluate their appropriateness for use in the United States. Looking beyond the immediate goals of this project, the results of this study should form a major resource for the drafting of legislative proposals at all levels of government in the United States. (ALS)

86. INFORMATION SYSTEMS SURVEY

Main Investigator: Clark D. Rogers.

Status of Research and Publications: Preliminary report submitted to American Institute of Planners.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, under sponsorship of American Institute of Planners, Information Systems Committee of the Research Division.

Previous Digest Report: None.

Research Problem. To identify public and private agencies engaged in the design, development, and operation of both data-oriented and bibliographic oriented automated information retrieval systems; identify persons and committees surveying information retrieval systems; identify organizations with activities similar to the AIP's Information Systems Committee; and determine a basic framework of information systems.

Method of Study and Major Findings. Major findings from questionnaires mailed to 69 planning agencies and individuals indicate that there are nine information systems under consideration, eleven being designed or developed, and nine operational. Of the operational systems, none is considered fully automated, and no single agency of local, state, or federal government has emerged as a controlling unit of information services. Development of information retrieval systems is still at an early enough stage to allow for effective cooperation and coordination among agencies to prevent inefficiencies, duplication of effort, and incompatible and low-quality data. Information most often programmed for these machines includes land use and census data. Business licenses, social and environmental data, etc., are also used. IBM middle-range equipment is utilized most. (CDR)

87. RENEWAL OF TOWNS AND VILLAGES

Main Investigator: George S. Duggar.

Status of Research and Publications: Completed and published by International Union of Local Authorities as Urban Renewal Objectives and Practices of Local Government: A Comparative Study, in a series of reports titled Renewal of Town and Village.

Agency: University of Pittsburgh, Graduate School of Public and International Affairs, Urban Affairs Department, under sponsorship of International Union of Local Authorities.

Previous Digest Report: 12:1-98. (GSD)

88. ANALYSIS OF A TRADITIONAL CHINESE COMMUNITY

Main Investigator: C. K. Yang.

Status of Research and Publications: In process.

Agency: University of Pittsburgh, School of Social Science.

Previous Digest Report: None.

Research Problem. To study the ecological and social structure of Foshan, China, as a case of preindustrial urbanism in China.

Method of Study. Documentary sources constitute the main type of information, although limited field information is being collected from refugees in Hong Kong who came originally from the town of Foshan. The leading topics of analysis include: some demographic features; the town's economy, with emphasis on the system of division of labor and socio-economic differentiation; social structure, emphasizing institutional system; stratification analysis, emphasizing the status of merchants and artisans and their power relationship to the gentry or mandarins; and value system, emphasizing the incongruity of Confucian values with requirements of industrial and commercial operations. (CKY)

89. FISCAL SURVEY OF THE FRENCH CARIBBEAN

Main Investigators: Fuat M. Andic and Suphan Andic

Status of Research and Publications: Completed. Published in 1965 by the Institute of Caribbean Studies as Special Study No. 2. Completion and publication of Dutch West Indies survey expected in summer of 1966.

Agency: University of Puerto Rico, Institute of Caribbean Studies, with funds from Ford Foundation.

Previous Digest Report: 12:1-104

Research Problem. Analysis of the fiscal systems of Guadeloupe, Martinique, and French Guiana, the overseas departments of France. Main focus is on their tax systems. Account is given of individual taxes, their assessment and collection, yield and importance. Account is also given of government expenditure. The historical background of the countries and their present political, social, and economic setting are taken into consideration. Fiscal relations with France are investigated.

Major Findings. Public expenditures constitute a very high proportion of aggregate output, and taxes collected locally are around 60 per cent of all taxes. Tax system relies heavily on indirect taxation. A significant feature of the revenue system is the large share of transfers from other levels of government in the budgets of the departments. A weighted index shows that the tax burden is significantly higher than that of France and of some other Caribbean countries. (SA)

90. ATTITUDES AND IDEOLOGIES OF THE SPANISH SPEAKING "INTELLIGENTSIA" IN THE CARIBBEAN

Main Investigator: Manuel Maldonado Denis.

Status of Research and Publications: Completion expected by 1966-67.
To be published by the Institute of Caribbean Studies.

Agency: University of Puerto Rico, Institute of Caribbean Studies,
with funds from Ford Foundation.

Previous Digest Report: None.

Research Problem. To analyze the preoccupation of the "intelligentsia" of Puerto Rico, the Dominican Republic, Mexico, Columbia, and Venezuela, with social change.

Hypothesis. The main tenet of the "intelligentsia" is that social change cannot be undertaken within the present institutional framework. Attitudes vary in accordance with the ideologies that serve as background. This means that the "intelligentsia" in the Caribbean is highly "politicized" and constitutes one of the forces that militate in favor of social change.

Method of Study. Personal interviews with intellectuals of all ideological tendencies, study of their written works, and use of other primary sources. (SA)

91. STUDY OF THE DOMINICAN REPUBLIC IN THE NINETEENTH CENTURY

Main Investigator: H. Hoetink.

Status of Research and Publications: Part I completed and published in Caribbean Studies, Vol.V, No. 3, October, 1965. Remainder to be published in the future.

Agency: University of Puerto Rico, Institute of Caribbean Studies, with funds from the Ford Foundation.

Previous Digest Report: None.

Research Problem. A descriptive study of social and economic change under Creole dictatorship, emphasizing cultural and psychological history, political structure, social stratification, economic changes, and Dominican culture.

Method of Study. Data based on government documents, newspapers and periodicals, diaries and contemporary literature.

Major Findings. In the last three decades of the 19th century there was a transition from an essentially self-sufficient agriculture to a capital intensive sugar industry. Subsequently, a different pattern of private property ownership emerged. Traditional forms of sugar production disappeared and were replaced by large, agricultural enterprises owned mostly by foreigners. The mobility of the rural population and their participation in the economy increased. (SA)

92. THE POLITICAL RELATIONSHIP OF THE FRENCH ANTILLES WITH FRANCE, AND OF THE NETHERLANDS ANTILLES AND SURINAM WITH HOLLAND

Main Investigators: Thomas G. Mathews, Gerard Latortu, Fuat M. Andic, and Suphan Andic.

Status of Research and Publications: Completed and published by the United States-Puerto Rico Commission on the Status of Puerto Rico. Future publication anticipated by the Institute of Caribbean Studies, University of Puerto Rico.

Agency: University of Puerto Rico, Institute of Caribbean Studies, with funds from the Ford Foundation and the United States-Puerto Rico Commission on the Status of Puerto Rico.

Previous Digest Report: 12:1-102.

Research Problem. (1) To investigate the post-World War II development toward autonomy and/or departmentalization, the general nature of the governments concerned, the powers reserved for France and Holland, and evaluate the degree of autonomy. (2) To describe the political organization in the French and Netherlands Antilles, the relationship between central/federal governments and local departments/island governments, the economic ties with the metropolitan countries, and evaluate the attitudes and opinions of political leaders and pressure groups with respect to these relationships.

Method of Study. Interviews and direct consultation with representatives of parties and governments concerned.

Major Findings. There is a sizable minority dissatisfaction with the assimilation policy of France in both Guadeloupe and Martinique, while the existing political relationship of Netherlands Antilles with Holland is considered to be generally satisfactory. In Surinam, some interest is expressed in participating directly in international organizations. With respect to the degree of autonomy, it is found that in Guadeloupe and Martinique very little local autonomy is permitted under the highly centralized French system. There is a maximum degree of local autonomy in Netherlands Antilles and Surinam. In the former, Holland appears to be reluctant to interfere even if she were requested to; in the latter, Dutch economic pressure provokes some resentment. (SA)

93. CARIBBEAN TRADE--PAST AND FUTURE

Main Investigators: Fuat M. Andic and E. Gutierrez.

Status of Research and Publications: Completion expected by 1966.
To be published by Institute of Caribbean Studies, University of Puerto Rico.

Agency: University of Puerto Rico, Institute of Caribbean Studies, with funds from the Ford Foundation.

Previous Digest Report: None.

Research Problem. An analysis of intra-Caribbean trade within the framework of two recent developments in the area: (1) the establishment of new industries and setting up of protective tariff walls around them; (2) attempts to bring about radical changes in the structure of the economies not only through industrialization, but also through forming regional economic groupings considered to be a possible way for genuine economic and political independence.

Hypotheses. (1) Despite the different levels of development, intra-Caribbean trade is still insignificant with respect to the total trade of the countries with non-Caribbean countries, because of established habits, lack of knowledge, etc. (2) The imports of some Caribbean countries from the non-Caribbean area may very well be the exports of other Caribbean countries to the non-Caribbean area.

Method of Study. Formulation of three import-export tables, arranged in a matrix form, to show (1) the degree of significance of intra-Caribbean trade with respect to the total trade of the individual countries in terms of dollars; (2) the types of goods that are interchanged; (3) the types of goods that can be interchanged. (SA)

94. SMALL ISLANDS IN THE MODERN WORLD

Main Investigator: Donald W. Hogg.

Status of Research and Publications: Completion expected by 1968 or 1969.

Agency: University of Puerto Rico, Institute of Caribbean Studies, with funds from the Ford Foundation.

Previous Digest Report: None.

Research Problem. To study and analyze the social and political reactions of people living on the small islands of the Lesser Antilles to major developments in the modern Western World, and the effects of these reactions. Study will focus on the social and cultural backgrounds of these islands, the problems peculiar to their roles as isolated communities, and the general nature of social protest movements and their leadership.

Method of Study. Extensive investigation into the cultures, social organizations, and general attitudes of the peoples of Lesser Antilles; field work on socio-political movements in the Leeward and Windward islands; comparisons of these findings with other small islands, such as Micronesia, to determine whether there are basic cultural and political features that grow out of island environments. (SA)

95. POLITICAL ORGANIZATION IN LATIN AMERICA: COMPARATIVE BUREAUCRACIES

Main Investigator: Robert W. Anderson.

Status of Research and Publications: Completion of research and publication as a book expected in 1966 or 1967.

Agency: University of Puerto Rico, Institute of Caribbean Studies, University of California (Berkeley), Institute of International Studies and Department of Political Science, under sponsorship of Rockefeller and Ford Foundations.

Previous Digest Report: None.

Research Problem. A comparative analysis of political development in Latin America through a study of the dimensions, structure, functions, and perceptions of the public bureaucracy in selected Latin American republics.

Hypotheses. It is generally taken for granted that some countries in Latin America are moving or have moved towards a national integration of the political aims and demands of the society with the bureaucratic apparatus necessary for their legitimized implementation. One purpose of this study is to test the validity of these assumptions and to discover the factors which influence the development of a legitimate and effective public bureaucracy.

Method of Study. Examine the processes of recruitment for public service; the nature of the special training, if any, for the government bureaucracy; its degree of professionalization and continuity; its self-perception; the relations of the civil bureaucracy with other elite groups within the polity--the ecclesiastical and military bureaucracy, private corporate entities, and other political groups. (SA)

96. INDUSTRIAL AND ECONOMIC DEVELOPMENT IN RURAL AREAS OF INDIANA

Main Investigators: H. A. Wadsworth, John O. Dunbar, Martin T. Pond and others.

Status of Research and Publications: A continuing project initiated July 1, 1964. One research project completed and published as a doctoral dissertation, James Merrill Conrad, An Economic Analysis of the Impact of a New Industry on a Rural Community, Purdue University, August, 1965. Research bulletin to be published soon.

Agency: Purdue University, Agricultural Experiment Station.

Previous Digest Report: None.

Research Problem. In view of uneven progress of economic development in Indiana, (1) to identify changes in the pattern of types and locations of industries in Indiana, (2) to determine major economic factors which influence location of different types of industry in Indiana, and (3) to determine the economic and social effects on a local community of changes in the industrial composition of the community.

Previous Relevant Research. A study by Wallace in 1961 of Industrial Locations in Southern Indiana and by Stevens, in 1963, of the effect of industrial development upon the economy of Howard County, Indiana. Other research includes Lee R. Martin, "Relevant Alternatives in Resolving the Rural Poverty Problem," Journal of Farm Economics, Vol. 46, No. 2; M. L. Upchurch, "Progress in Resolving the Problem of Rural Poverty," Journal of Farm Economics, Vol. 46, No. 2.

Method of Study. Case study analysis, regression analysis of secondary data, and simulation of various community economic structures. An analysis will be made to determine the reasons for expansion or contraction of individual areas. The analysis will be concerned with the associated changes of transportation facilities, changes of labor cost differentials, introduction of new technology, population changes, and other factors. Social changes associated with industrial change will also be examined. The magnitude of the problem of providing schools, churches, health and recreation facilities, fire and police protection to meet the felt needs of the people will be ascertained through community surveys.

Major Findings. The first project to be completed is that of James Conrad, testing the hypothesis that the costs of acquiring a new factory are as great to a town as the economic benefits it receives. (1) A new Aluminum Chair factory created 100 new manufacturing jobs in Linton, Indiana, in 1964. The impact of these jobs was diluted by "leakages" to the external economy. More than half the jobs were filled by former commuters from Linton or by new in-commuters. Savings, exportation of payroll, and paying off old debts before incurring new ones, all worked to diminish the size of the new income investment. The employment multiplier was an extremely low 1.017 since only two service jobs were created during 1964 for the 119 new industrial jobs. (2) Despite the increase in manufacturing employment, the population of Linton only increased by three in 1964, requiring no expansion of public facilities. Although the firm paid no taxes during its first year, the Linton-Stockton school corporation will receive approximately \$8400 in tax revenue from the plant in 1965. Since the factory is located in the adjacent township, the city will receive only the revenue channeled for school expenditures. (3) The 100 jobs directly increased the town's total income in 1964 by \$24,550. However, other local servicing firms had a direct gross income increase of \$15,100, giving a total of \$39,650. Using the multiplier of four derived from the consumption function of the 100 Aluminum Chair factory employees, the predicted increase in local income is \$158,600, a per capita increase of about \$26 in 1964. (4) Linton experienced less than a 2% increase in retail sales in 1964. The net change in the sales volume is \$226,119, almost twice as large as the derived income increase. However, much of the sales increase could be attributed to other economic factors: increased employment by General Electric and nearby Bloomington plants, higher incomes for many local people, tax cuts, and other stimulus factors. The increase in sales can be attributed only in part to the Aluminum Chair factory's economic impact upon the local economy. (5) The cost benefit analysis was used to determine the time period required to recover the public expenditure by the town of Linton in acquiring this new industry. The total expenditure was \$29,428 including the extension of water, sewage, gas, and electric lines plus a 20 acre plant site. Assuming local retail businesses have a 5% profit margin, times \$158,600 increase in sales, the public expenditure would be recovered in less than five years. In this particular case, acquisition of a new industry seemed to be a wise investment. (HAW)

97. EVALUATION OF METHODS FOR UPDATING ORIGIN AND DESTINATION STUDIES

Main Investigators: Marvin Golenberg and W. L. Grecco.

Status of Research and Publications: In process.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission.

Previous Digest Report: 11:2-89.

Research Problem. Several combinations of growth factor methods and land use generation methods were evaluated as techniques for updating and prediction.

Method of Study. Study involved measurements of changes in land use, population density, total population, and vehicle ownership in the selected city. Studies of census reports, automobile registration, and records of building activity were made. Field studies and studies of aerial photography were used to determine specific land use changes since the original O-D study. This information was converted into a form suitable for use of the several updating methods. The same raw data were used for each technique so no bias for any particular technique was introduced. Volume counts were made at various strategic locations. The trips predicted by the different techniques were compared with the trips actually counted. An evaluation of the predicted trips versus the actual trips was made for each technique. (HLM)

98. SYNTHESIS OF URBAN TRAVEL PATTERNS IN METROPOLITAN LAFAYETTE, INDIANA

Main Investigators: Stephen W. Ricks and W. L. Grecco.

Status of Research and Publications: In process.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission.

Previous Digest Report: None.

Research Problem. To evaluate the results for predicting urban travel patterns in large, metropolitan areas, obtained in 1964 by J. J. Schuster (see Digest report 11:2-85), and apply them to a smaller metropolitan area. An important aspect of the project is to evaluate the availability of accurate data for significant variables from various local sources or to establish techniques for quantifying the significant variables so developed models can be used at the local level.

Method of Study. Study will be limited to the Lafayette-West Lafayette metropolitan area. Travel patterns for 1964 will be developed from application of recommended models using current study area characteristics. (HLM)

99. TRAFFIC ASSIGNMENT BY SYSTEMS ANALYSIS

Main Investigators: W. A. McLaughlin and W. L. Grecco.

Status of Research and Publications: Research completed and reported in doctoral dissertation by W. A. McLaughlin, "Traffic Assignment by Systems Analysis," Purdue University, June, 1965.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission.

Previous Digest Report: 11:2-88.

Research Problem. The assignment of traffic to a network of streets by systems techniques.

Method of Study. A method was evolved by which paths or routes between any origin-destination pair could be determined. The basis of this path finding technique employs empirical evidence available from previous diversion type studies. Method computes the "n" best paths in a network between any origin-destination pair subject to a diversion type restraint. It was hypothesized that the value function used by travelers would be equal on alternate paths developed by the path finding algorithm. The techniques of linear graph theory were used to assign traffic to the developed paths. To evaluate the postulated value functions, path finding algorithm, and linear graph assignment techniques, a synthetic network was assigned traffic by the various current techniques and compared with the assignments of the proposed algorithm. Further evaluation was made using the city of Brockville, Ontario. (HLM)

100. FORMULATION OF A TECHNIQUE FOR EVALUATING URBAN HIGHWAY NEEDS

Main Investigators: R. C. Rude and J. C. Oppenlander.

Status of Research and Publications: In process.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission.

Previous Digest Report: 11:2-91.

Research Problem. Needs studies of urban street systems are costly, time consuming, and require a large number of personnel. The purpose of this project is to formulate sampling techniques which can be used to reduce the expenditure and time necessary to conduct such studies.

Method of Study and Major Findings. Before a procedure could be developed using sampling techniques, it was necessary to have a complete needs study. This needs study was conducted in West Lafayette, Indiana. The initial approach used was the typical engineering analysis, where each section of street and each intersection was investigated thoroughly. This investigation revealed high variability, with regard to improvement costs, in each group of the street section and intersection classifications. The highest variability was observed for arterial street sections, the lowest for the intersections of collector streets. Graphs were prepared showing the percent of sample versus the standard error of the mean, in terms of improvement cost, for each category. From these graphs the expected variation in the cost of improvement, within known limits, can be determined for a given sample size in West Lafayette, Indiana. (HLM)

101. ANALYSIS OF REGIONAL TRAVEL PATTERNS

Main Investigators: L. H. Tittlemore and J. C. Oppenlander.

Status of Research and Publications: Completed and published as a thesis by L. H. Tittlemore, "Analysis of Regional Travel Patterns for a Medium-Sized Community," Purdue University, 1965.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission.

Previous Digest Report: 11:2-90.

Research Problem. Determine the factors that generate highway travel between the central city of a region and its surrounding zone of influence.

Method of Study. The central city studied was Fort Wayne, Indiana, which depends upon the people in smaller communities to sustain its regional facilities. Conversely, these smaller cities depend upon Fort Wayne for various needs. The two types of traffic flow analyzed were trips attracted to and trips produced by the central city. Basic form of the regression equations was the gravity model: trip production or attraction is directly proportional to the product of a given mass function of the two cities and inversely proportional to some power of the distance between communities. Internal and external competition factors were introduced into the models to describe more completely the variations in regional trip generation and distribution. Trips were separated into specific trip categories (work, shopping, social-recreational, and all-purpose) and travel types (produced and attracted). The total study region was divided into core and fringe areas.

Major Findings. The internal competition within a city had a negative effect on trip generation throughout the study region. However, the external competition of other cities was only significant in reducing trip generation for communities in the fringe area. (HLM)

102. RECREATIONAL IMPACT OF FEDERAL MULTI-PURPOSE RESERVOIRS

Main Investigators: J. S. Matthias and W. L. Grecco.

Status of Research and Publications: In process.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission and U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. To provide necessary data to assist Office of Highway Development, Indiana State Highway Commission, in planning for future highway requirements of recreational travel to federal multi-purpose reservoirs in the state.

Method of Study. Mansfield, Cagles Mill and Monroe reservoirs in Indiana selected for study. For these reservoirs, models will be developed to predict: (1) numbers and characteristics of the users (family size, adults, minors, returnees); (2) sphere of influence of the facility (distances that users travel, direction, effect of competing facilities); (3) characteristics of traffic generated by the facility (how many vehicles, where from, when); (4) effect on land value and land use. The second or continuing phase of the study will concern validation of the above models and estimation of changes in characteristics and demand over a period of time. (HLM)

103. TRAFFIC GENERATION AND DISTRIBUTION OF WEEKEND RECREATIONAL TRIPS

Main Investigators: L. L. Schulman and W. L. Grecco.

Status of Research and Publications: Completed. Findings reported in L. L. Schulman, "Traffic Generation and Distribution of Weekend Recreational Trips," MSCE Thesis, Purdue University, June, 1964.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission.

Previous Digest Report: None.

Research Problem. To define and determine a single exponent gravity model for the distribution of weekend recreational trips, and to test the accuracy of the evolved model in making the theoretical distribution.

Method of Study. In this study, the state park was chosen as the recreational area, and the residential area was defined as the county. Data were collected for a five week period by means of a license plate study. The study included the determination of the appropriate gravity model and regression model to predict the number of trips which would be attracted to a recreational area. The distance of attraction and the period of use were also studied and measures determined.

Major Findings. Ten factors, basically measures of the facilities available, were found to be important contributions in the attraction model. (HLM)

104. IMPACT OF LEBANON AND KOKOMO BYPASSES

Main Investigators: E. G. Evans, H. L. Michael, and R. J. Henson.

Status of Research and Publications: A continuing, long-term study. New publications issued are R. J. Henson, H. L. Michael, and J. S. Matthias, "Impact of Lebanon Bypass 1950-1963," Special Report, Joint Highway Research Project, 1964; E. G. Evans, "Impact of Kokomo Bypass 1950 to 1964," MSCE Thesis, Purdue University, August, 1965.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission and U. S. Bureau of Public Roads.

Previous Digest Report: 11:2-87.

Research Problem. The effect of the construction of a bypass around an urban area on land use and development, land value, traffic flow, traffic accidents, and the community in general.

Method of Study. The bypasses under study were constructed in 1950 as two-lane, non-limited access facilities. Each has been reconstructed to four lanes, one with limited access, the other without full control of access. This study will focus upon the changes which have occurred following the initial and later reconstruction, including evaluation of their long-term, short-term, and intermediate effects. (HLM)

105. IMPACT OF AN INTERSTATE AND A MAJOR RURAL HIGHWAY

Main Investigators: J. S. Matthias and H. L. Michael.

Status of Research and Publications: In process. Findings to date reported in J. A. Fletcher, "A Study of the Early Effects of a Rural Interstate Highway," MSCE thesis, Purdue University, June, 1961.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission and U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problems and Method of Study. The impact of Interstate Highway 65 (between Lebanon and Indianapolis) and U. S. Highway 31 (between Kokomo and Indianapolis). Interstate 65 is on new location and generally parallels a former major highway, approximately one-eighth mile distant; U. S. 31 is a major highway, recently reconstructed to four lanes. The changes in land use, land value, and assessed valuation, as well as traffic changes, are specific variables of interest. Data on these factors are being collected and organized so they can readily be kept current and studies of long term effects be made at later dates. (HLM)

106. EVALUATION OF THE EFFECTIVENESS OF TRAFFIC ENGINEERING APPLIED TO THE U. S. 52 BYPASS

Main Investigators: T. B. Treadway, A. O. Peterson, G. A. Shunk, H. L. Michael, and J. C. Oppenlander.

Status of Research and Publications: In process. Completion expected in 1968. Findings to date reported in T. B. Treadway, "An Analysis of Travel Speed and Delay on a High Volume Highway," MSCE Thesis, Purdue University, June, 1965; A. O. Peterson, "An Analysis of Traffic Accidents on a High-Volume Highway," MSCE Thesis, Purdue University, August, 1965.

Agency: Purdue University, Joint Highway Research Project, under sponsorship of Indiana State Highway Commission and U. S. Bureau of Public Roads.

Previous Digest Report: 11:2-92.

Research Problem. To present a qualitative and quantitative demonstration of the effectiveness of traffic engineering. (HLM)

107. THE ECONOMICS OF HOUSING SEGREGATION

Main Investigator: Anthony H. Pascal.

Status of Research and Publications: Research completed. To be published as a RAND Research Memorandum and as journal article or book.

Agency: RAND Corporation. (Originally initiated under a Ford Foundation grant.)

Previous Digest Report: None.

Research Problem. To gauge the extent to which segregation of non-whites in U. S. cities is attributable to socio-economic differences between white and non-white households and how much is attributable to prejudice.

Method of Study. An index of segregation was calculated by subtracting the proportion of a city's white population which lived in the ghetto from the proportion of its non-white population living in the ghetto. The ghetto was defined to include all sub-areas of the city in which the proportion of non-white residents significantly exceeded the city-wide proportion. Indices of the range .700-.900 were typical of the largest American cities in 1940, 1950, and 1960. Detroit and Chicago rank particularly high in non-white segregation. (In both, more than 95% of non-white were Negroes.) To test the extent to which the variation in non-white residence proportion among the sub-areas of these cities could be explained by variation in the physical and economic attributes

of sub-areas, least square linear regression equations were fitted to cross-section data on rents, structure types, and access to non-white employment for each sub-area. The selection of the independent variables was predicated on the hypothesis that a household, when confronted with a stock of housing sites with varying attributes, selects a residential location which will maximize its utility, i.e., a location determined by the household's permanent income, its size and composition, and its head's status (sex, age, marital, etc.) and job location. Evidence of substantial disparities between white and non-whites in these socio-economic characteristics is presented.

Major Findings. The socio-economic equations explain about one-half of the variance in non-white sub-area proportions in the Chicago metropolitan area in 1960 and about one-third of the variance in the Detroit metropolitan area in 1950. Analyses of the differential importance of the separate and combined variables in each city are provided. Additional evidence on the existence of non-socio-economic segregation is afforded by an examination of Chicago data on residence patterns of racial groups, stratified by household income. On the basis of this socio-economic regression model, the ghetto for each city was redefined to include those sub-areas in which the actual non-white proportion significantly exceeded the predicted proportion. This adjustment reduced the index of segregation by less than 20% in both metropolitan areas. To assess the likely extent of self-segregation of non-whites, their segregation indices were compared to indices derived for Italo-American and white Southern migrant households in Chicago, 1960. These may be taken, respectively, to represent a group which, facing neither economic nor majority group pressure, chooses segregation and a group which follows the typical migrants' clustering pattern so as to take advantage of the economies of information, institution-sharing, etc. The segregation index for all non-whites as adjusted for socio-economic differences and an index calculated for non-white households with incomes exceeding the white median were both considerably larger than those for either of these control groups. (AHP)

108. PLANNING AND DESIGN OF FACILITIES TO HOUSE CURRENT TRENDS IN INSTRUCTIONAL METHODS AND TECHNOLOGIES

Main Investigators: Alan C. Green, Wayne F. Koppes, and M. C. Gassman.

Status of Research and Publications: In process.

Agency: Rensselaer Polytechnic Institute, School of Architecture,
under sponsorship of U. S. Department of Health, Education,
and Welfare.

Previous Digest Report: None.

Research Problem. (1) To assess current trends in instructional methods, technologies, and procedures at all levels of education and their effect upon planning and design of educational facilities. (2) To

develop design criteria and guidance for planning of appropriate facility types and systems of facilities to properly accommodate these trends.

Method of Study. (1) Identification and assessment of trends and developments in instructional techniques and methods at all levels of education. (2) Definition of facility types and systems of facilities necessary to house the significant new techniques and methods. (3) Development of data and information as guidance in the programming, planning and design of facilities. (4) Development of schematic drawings and design studies to illustrate concepts of planning and design. (ACG)

109. REGIONAL ECONOMIC DEVELOPMENT OF THE UNITED STATES, 1940-1960

Main Investigator: Edgar S. Dunn, Jr.

Status of Research and Publications: In process. To be published as book.

Agency: Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To describe and analyze the regional economic development of the United States over two decades, 1940-1960.

Method of Study. The study is based upon a complete shift-share matrix for every county in the U. S., in 32 industry sectors as developed by the Office of Business Economics in the U. S. Department of Commerce. These data are combined with other coefficients measuring specialization, localization, export status, etc., and combined further with a series of background characteristics, such as the urban characteristics of the area. A point analysis, a period analysis, and a transition analysis based upon the two time periods will be made. Special effort is being made to specify more clearly the way that regions transform, in order to provide information about probable options available to regions of different types. (ESD)

110. AN ANALYSIS OF ALTERNATIVE POLLUTION CONTROL SYSTEMS FOR THE POTOMAC ESTUARY

Main Investigator: Robert K. Davis.

Status of Research and Publications: In process. Preliminary findings reported at Western Resources Conference, Ft. Collins, Colorado, 1965.

Agency: Resources for the Future, Inc.

Research Problem. The multipurpose plan for development of the water resources of the Potomac Basin, recently completed by the U. S. Corps of Engineers, is the first river basin plan in which problems of water quality and recreational use assume the dominant role. Because it is difficult to measure some of the costs and returns involved in programs concerned with water quality and recreation, it is desirable to understand the possible range of choice open to public programs dealing with such matters. The major question addressed is how would the plan have been different if a wider range of alternative solutions or specific objectives had been explored? The implicit question addressed concerns the jurisdictional, institutional, or analytical constraints which may unduly restrict the range of choice explored in multipurpose river basin planning.

Method of Study and Findings. The range of choice in meeting the water quality requirement defined for the Potomac Estuary was developed by examining nine processes which might be used in various combinations. The processes examined included five waste treatment processes capable of removing up to 90% of the organic waste in effluent from secondary sewage treatment plants, the distribution of effluents over much larger areas of the Estuary than now contemplated, reaeration by mechanical and diffused aeration processes, and low flow augmentation. A sample of systems using combinations of these basic processes indicates that systems costs may vary from \$7 million to \$294 million (present value). The systems available include some novel uses of technology such as reaeration by mechanical or diffused air devices and use of carbon adsorption as a tertiary treatment process. The choice available in water quality objectives was examined by studying the costs of reservoir systems designed to achieve two alternative dissolved oxygen objectives, dissolved oxygen being the criterion of water quality in the Corps' study. A cost increment of \$44 million arises between systems designed to achieve 3 ppm dissolved oxygen and 5 ppm dissolved oxygen. The question is whether the benefits of achieving 5 ppm rather than 3 ppm are worth \$44 million. It may be concluded that we do face a wide range of alternative benefit-cost configurations in dealing with the water quality problems exemplified by the case under study. Since objective means are not at hand for designating a "best" plan out of such a variety of choice, we are forced to ask how water resource planning processes can be used to make more informed choices in the vast expenditure programs to be undertaken in the interests of pollution control. (RKD)

111. RECREATIONAL DEVELOPMENT ON LAKE OF EGYPT

Main Investigators: William Freeberg, Loren Taylor, Allen J. Worms, and Stanley K. Brickler.

Status of Research and Publications: In process.

Agency: Southern Illinois University (Carbondale), Recreation Department, under sponsorship of Southern Illinois Power Co-Op.

Previous Digest Report: None.

Research Problem. To determine the desirability of developing Lake of Egypt for recreation and to measure the subsequent effects of such development upon the quality of the water, the shore line, and the economies of surrounding municipal communities.

Method of Study. Lake of Egypt, seven miles south of Marion, Illinois, on Route 37, claims some 2300 acres of water and 93 miles of shore line. The project will measure and analyze the effect of Lake of Egypt's recreational development upon the chemical and biological quality of the water, shore line erosion (amount, degree, and control), and economies of adjacent communities. A recreational use survey of the lake will be made.

Major Findings. Measurements taken and biological analyses made to date, indicate that in some areas where housing and recreational developments exist, there is a high degree of Coliform and Enterococcus. Some shore line erosion has been found and measured on those shores unprotected from prevailing winds and wave action, where recreation development has disturbed and exposed the soil by removal of vegetation. (SKB)

112. POPULATION PROJECTIONS FOR THE STATE OF ILLINOIS AND ELEVEN COMPONENT REGIONS TO THE YEAR 2010

Main Investigator: Jane Schusky.

Status of Research and Publications: Completion expected fall of 1965.

Agency: Southern Illinois University (Edwardsville), Public Administration and Metropolitan Affairs Program. (This project is part of Statewide Economic Study for Illinois. See Above, Item 42.)

Previous Digest Report: None.

Research Problem and Method of Study. A component projection method will be employed to develop projections for eleven regions of the state. These projections will be indicated for each decennial year to 2010, and separate estimates will be developed by age, race, and sex. Economic indices, developed by the Bureau of Business and Economic Research, University of Illinois, will be consulted for the analysis of migration trends in the regions. Regional vital statistics information and Bureau of the Census estimates for future trends in vital rates will be studied for the development of the birth and death components. (JS)

113. INTRA-COUNTY TAX UNIFORMITY

Main Investigator: Leo Cohen.

Status of Research and Publications: Completed July, 1965.

Agency: Southern Illinois University(Edwardsville), Public Administration and Metropolitan Affairs Program.

Previous Digest Report: 12:1-113.

Research Problem. To measure the degree and analyze the problem of unequal tax assessments within and between townships in Madison and St. Clair Counties, Illinois.

Major Findings. Statistical data indicate that inequities exist between owners of various classes of real property. This study, consistent with similar studies, suggests the need for improving the quality of assessment and professionalizing the role of the assessor. Although touching only slightly on the distribution of the educational tax burden, the data also show a lack of equity within these complex, geographical boundaries. Discrimination against owners of improved property is quite prevalent, especially in urban areas. Evidence also indicated a sharp lack of uniformity within given classes of property on a county-wide basis. The sales ratio data reflect the national trend of regressive assessment--low value real properties assessed at higher levels than high value properties. In comparing Madison and St. Clair Counties, the township levels of assessment for urban improved property were found to be lower in St. Clair. Within townships and between counties, there was little difference in uniformity for any given class of property. (LC)

114. THE DETERMINANTS OF EDUCATIONAL EXPENDITURES IN THE LARGE CITIES OF THE U. S.

Main Investigator: H. Thomas James.

Status of Research and Publications: In process.

Agency: Stanford University, School of Education, under sponsorship of U. S. Office of Education.

Previous Digest Report: None.

Research Problem and Method of Study. A rationale for the study of state school revenue systems, developed in two previous studies, will be used to analyze educational expenditures in large cities. This rationale postulates three clusters of determinants of educational expenditures: (1) those describing the cultural level of a community, from which expectations for educational services are generated, creating a demand for education; (2) those describing the community's resources, that generate ability to support educational

services; (3) those descriptive of governmental arrangements that allow demand to be expressed and resources to be allocated for the support of educational services through decision-making processes.

Work already completed establishes that a large part of the variations in school expenditures among states can be explained by factors of demand and ability, and the rest related to known variations in governmental arrangements for decision-making. This study will apply the rationale to large city data, and, by refining and quantifying variables associated with decision-making, incorporate this third cluster of variables into a model for multiple regression analysis. The implications of the study for public policy are promising. In addition to providing a basis for predicting educational expenditures under varying social, economic, and political conditions, it should provide new insight into the consequences of alternative arrangements for decision-making in school finance. (HTJ)

115. THE ECONOMICS OF WATER QUALITY AND WASTE

Main Investigator: Bernard C. McBeath.

Status of Research and Publications: In process.

Agency: Stanford University, School of Engineering, under sponsorship of Resources for the Future, Inc., as part of their project, "Water Economics in the Pulp and Paper Industry."

Previous Digest Report: None.

Research Problem. Costs of maintaining stream quality standards and their sensitivity to changes in variables and parameters of the system. System is composed of two waste treatment plants on a stream and affected parts of the stream below the plants.

Method of Study. The model is described in mathematical form. A computer program is used to test sensitivity of parameters and to plot some of the cost-quality relationships. (BCM)

116. LOCAL GOVERNMENT PUBLIC WORKS DECISION-MAKING

Main Investigator: Robert R. Lee.

Status of Research and Publications: Completed. Report available as doctoral dissertation from Stanford University Microfilms. Same report published as Report EEP-9, Institute in Engineering-Economic Systems, Stanford University.

Agency: Stanford University, School of Engineering, Program in Engineering-Economic Planning, with support from Ford Foundation and Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. To investigate the role of engineering economy in local government public works decisions.

Method of Study and Major Findings. A decision by Santa Clara County, California, concerning the importation of water, served as an extended case study and the basis for the report. The report reviews the application of the efficiency concept to decision-making in general and the techniques of Engineering-Economy as applied to such decisions. The controversy over the Santa Clara County water importation is reviewed in detail, using all available sources, including newspaper accounts, direct discussions with the principal actors in the decision, and engineering reports relevant to the project. Particular emphasis is devoted to the techniques of analysis employed in the study reports which form the technical basis for the decision. The analysis indicates that there were numerous errors in the fundamental studies on which the final decision was made, that the goals of the project were never stated clearly, and that several possible alternative solutions were never studied. Political pressures also played an important role, forcing a decision on the basis of inadequate information. The proper use of the techniques of Engineering-Economy in the particular case under study are outlined. (RRL)

117 ENGINEERING-ECONOMIC ASPECTS OF THE DECISION-MAKING PROCESS IN MUNICIPAL ELECTRIC UTILITIES

Main Investigator: Richard Stewart Leavenworth.

Status of Research and Publications: Completed. Submitted as a doctoral dissertation, Stanford University, 1964.

Agency: Stanford University, School of Engineering, Program in Engineering-Economic Planning, under sponsorship of Resources for the Future, Inc.

Previous Digest Report: None.

Research Problem. Problems of investment planning in the municipal electric utility industry.

Hypothesis. Techniques of engineering economy, as applied by municipal electric utilities to choose between alternative investment opportunities, have been improperly used and reflect to a considerable extent the social, legal, and financial institutions under which the industry has grown.

Method of Study. Conclusions of report based, in part, upon two case studies: The Cowlitz River Power Project of the City of Tacoma, Washington, and the Priest Rapids Project of Grant County PUD No. 2, Washington. This latter, planned for construction by the U. S. Army Corps of Engineers, was a \$350,000,000 project taken over by a small municipal utility with a 1950 gross book value of

less than \$5,000,000. The most pertinent aspect of this case study was the contractual methods employed by the utility to secure financing.

Major Findings. The municipal electric utility is set in the framework of a simple closed-loop model. The model contains five phases. The Environment phase is composed of electric power consumers who create kilowatt demand and kilowatt-hour consumption requirements to which the Planning phase responds. In the Planning phase, alternative courses of action are developed, each of which may have a different investment and operating cost profile. These differing cost profiles should be presented on an equivalent basis, which requires that cost streams be discounted at appropriate rates. In the Decision phase, a choice between alternative methods of financing must be made. In the Design and Construction phase, many economic decisions are made and many operating parameters become fixed, directly influencing operating costs for years to come. Therefore, economic criteria applied at the detail level should be consistent with those applied during initial planning and decision phases. Operating policies and pricing mechanisms developed in the Operating phase will directly affect the Environment. The Environment reacts to the parameters set in the Operating phase and adjusts its kilowatt demand and kilowatt-hour consumption accordingly. The loop is thereby closed.

The five main points developed in the report are: (1) The economic decision-making process should be separated from the financial decision-making process. (2) A minimum cost criterion for economic choice is adequate for decision-making purposes. (3) Choice must be made between real alternatives as each available alternative would affect system operation. (4) The price elasticity of demand for electric service requires that rates and charges, in an overall sense, be established upon long-run marginal cost of production. (5) Institutional factors are not reducible to monetary terms and, therefore, should be treated separately. (RSL)

118. THE VALUE OF TIME FOR PASSENGER CARS

Main Investigator: Dan G. Haney.

Status of Research and Publications: A continuing study begun in 1962. Following reports published: Dan G. Haney, "The Value of Travel Time for Passenger Cars: A Preliminary Study," Stanford Research Institute, Menlo Park, California, January, 1963; Dan G. Haney, "Use of Two Concepts of the Value of Time," HRB Record 12, 1963; David A. Curry, "Use of the Marginal Cost of Time in Highway Economy Studies," HRB Record 77, 1965; Peter D. Fox, "The Value of Time for Passenger Cars: A Behavioral Study of Driver Route Choice," Stanford Research Institute, Menlo Park, California, May, 1965.

Agency: Stanford University, Stanford Research Institute (Menlo Park), under sponsorship of U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. (1) Compile a bibliography of the value of time and related subjects. (2) Review the history of the valuation of travel time. (3) Summarize arguments regarding the value of time. (4) Estimate a family of curves of values of travel time and impedances classified by important travel and demographic characteristics. (5) Develop general mathematical models by which the values of travel time can be computed for specific situations. (RFB)

119. LAKESIDE: COMMUNITY IN TRANSITION

Main Investigator: Marian MacN. Deininger.

Status of Research and Publications: Completion expected winter of 1965.

Agency: Stout State University (Menomonie, Wisconsin), under sponsorship of Association of Wisconsin State College Faculties.

Previous Digest Report: None.

Research Problem. Study of a small, midwestern city. Report will include a brief history and a summary of the evidence showing that "transition" is taking place, but will focus on organizational structure, background characteristics, and views of 174 organization leaders who were interviewed concerning the community's image. Analytical concepts are to be derived from the problems of the small city in an urban society. (MMD)

120. POLICIES AND POLICY-MAKING IN LARGE CITY EDUCATION SYSTEMS

Main Investigators: Alan K. Campbell, Seymour Sacks, Frank Munger, Alan Rosenthal, Jesse Burkhead, John Holland, and William W. Wayson.

Status of Research and Publications: Field work and statistical analyses are in progress, and interim papers have been presented.

Agency: Syracuse University, Maxwell Graduate School, Metropolitan Studies Program, under sponsorship of the Carnegie Corporation.

Previous Digest Report: None.

Research Problem. An analysis of policy areas as they relate to the education systems of Atlanta, Boston, Chicago, New York, and San Francisco. The areas of study are: (1) Allocation of fiscal

resources; (2) Analysis of minority-group assimilation; (3) Administrator-teacher relations; (4) Cost and performance; (5) Curriculum development.

Previous Relevant Research. Jesse Burkhead's previous work on The Economics and Politics of Public Education, also sponsored by the Carnegie Corp.

Method of Study. Different areas of study are assigned to the faculty members. A graduate research assistant is located in each of these cities, collecting data and personal observations concerning its respective system. In conjunction with this research, several case studies have been commissioned which deal with specific decisions in each of these school systems. (AKC)

121. INTEGRATION IN RACIALLY IMBALANCED URBAN PUBLIC SCHOOLS

Main Investigators: Jerome Beker and Franklyn S. Barry.

Status of Research and Publications: Most facets of project currently in analysis phase. Several manuscripts in preparation or in press; one article published. An extensive progress report, dated February, 1965, available. Completion of final report expected summer of 1966. A monograph on community decision-making processes related to school integration currently being edited

Agency: Syracuse University, Youth Development Center, 926 South Crouse Avenue, Syracuse, New York 13210, and Syracuse City School District, under sponsorship of National Institute of Mental Health and U. S. Office of Education

Previous Digest Report: None.

Research Problem. To determine and document problems and opportunities that arise during the school integration process in a northern city and ways of handling them efficiently and effectively

Method of Study. Project is based on the integration implementation begun in the fall of 1964 by the Board of Education in Syracuse. Project is a composite of five distinct but overlapping sub-projects. (1) The work of "Integration Specialists" who served in each of three schools where racial balance was one factor considered in the re-assignment of pupils for the 1964-65 school year. Skilled school social workers and psychologists by profession, these individuals performed a variety of tasks to facilitate the academic and social integration of the newcomers. Included was work with pupils (old and new), parents, teachers, and principals. (2) A study of the community decision-making process that eventuated in the consideration of racial balance as a factor in school assignment. This work consisted primarily of confidential interviews with key individuals and the study of available public and private documents. A "case study" based on this research, with apparent

implications for other communities, has been prepared for publication. (3) Pre- and post-testing of re-assigned and "host" pupils, along with appropriate control groups, using a variety of measures of academic achievement and personal and social development. Supplementary material is being obtained from the pupils' school records. This research is focusing on all new students rather than only those re-assigned with factors of racial balance in mind, largely to permit a differential assessment of the effects of "newness" per se and newness to foster racial balance. (4) The same broad focus is being applied in the analysis of this phase, which involves participant observation and assimilation ratings on all new students. (5) Interviews with a large sample of parents of pupils involved, to ascertain their attitudes toward the re-assignment program, some of the social correlates of their attitudes, and possible relationships between their attitudes and their youngsters' school performance. Analysis of data from these three sources--testing, observation, and parent interviews--is currently in progress and will be inter-related where this seems feasible. (JB)

122. FAMILY STRUCTURE AND PUBLIC HOUSING IN PUERTO RICO

Main Investigators: Helen Icken Safa and Carlos Chardon.

Status of Research and Publications: In process.

Agency: Syracuse University, Youth Development Center, under sponsorship of U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. To determine whether public housing attracts and holds a higher percentage of female-based households or creates conditions favorable to their development; to compare the mobility rates of shanty town and project families in order to determine the impact of public housing on upward mobility.

Method of Study. This project is to follow up on a previous study conducted in Puerto Rico to determine the magnitude and character of the changes resulting from the relocation of families from shanty towns into public housing projects. One of the principal changes noted in the previous study is the higher percentage of female-based households in public housing as compared to the shanty town. The current project will attempt to determine whether this is due to selection procedure, to differential turnover rates, or to changes in family composition after the family enters public housing. Family structure will be held constant to see whether differential recruitment and turnover rates may also affect the mobility patterns of the project population. In this way, we hope to determine whether public housing and other welfare schemes give institutional support to female-based households and thereby contribute to the increasing numbers of these households in the United States and elsewhere. (HIS)

123. SOME EFFECTS OF URBANIZATION ON STORM RUNOFF FROM A SMALL WATERSHED

Main Investigators: Frank D. Masch and William H. Espey, Jr.

Status of Research and Publications: In process. Report to be published by the Texas Water Commission, Austin, Texas.

Agency: University of Texas, Department of Civil Engineering, Center for Research in Water Resources, under sponsorship of Texas Water Commission.

Previous Digest Report: None.

Research Problem. To evaluate synthetically the various effects of urbanization on the hydrologic characteristics of a small urban watershed located within Austin, Texas.

Method of Study. A linear regression analysis of data from 24 urban and 11 rural watersheds was used to derive equations for evaluating the past rural conditions, and predicting future urban conditions for the Waller Creek watershed. This watershed contains two streamflow gaging stations, one located at 38th street and the other at 23rd Street, gaging areas of 2.31 and 4.13 square miles, respectively. The watershed above 38th Street is relatively undeveloped when compared to the lower portion of the watershed located between the two stations. The lower portion has extensive residential development and some channel improvement.

Major Findings. Results indicate that urban development in the Waller Creek watershed has caused extensive changes in the discharge hydrograph and run off yield for the watershed. Predictions of the effects of future development indicate the same trend. The time sequence of the discharge hydrograph will be shortened, the peak discharge will be increased, and the unit yield (in/mi²) will be increased. (FDM)

124. A FUTURE FOR THE AGED IN PUBLIC HOUSING

Main Investigator: Frances M. Carp.

Status of Research and Publications: To be published as book by University of Texas Press, spring of 1966.

Agency: Trinity University, supported by Hogg Foundation for Mental Health, and U. S. Department of Health, Education, and Welfare, Social Security Administration.

Previous Digest Report: None.

Research Problem. (1) Impact of change in living situation on aged people. (2) Prediction of relative adjustment of aged people in a novel living situation. (3) Processes of social adjustment among elderly people who are strangers to each other

Method of Study. Demographic, biographical, attitudinal, and other psychological tests variable data were collected on 352 aged applicants for public housing limited to elderly people, in San Antonio, Texas. A year later, follow-up data were collected. This allowed an assessment of changes attributable to alteration in living circumstances. Predictors of adjustment for those who moved into the new living situation were compared with data collected at three-month intervals during the first year and a half from residents of the new building. These were analyzed and related to personality and circumstantial factors.

Major Findings. (1) Impact of improved physical and social living situations was striking in all areas. Generally, these changes were in the direction of reducing or even reversing behavioral changes usually attributed to chronological aging. (2) The predictors of adjustment in the new living situation would greatly aid the selection of residents for similar situations. (3) Relationships among this group of people were formed quickly and, apparently, remained satisfying over the period studied. Personality factors, rather than proximity or other determinants of the building, were most important in all the varieties of social interaction--leadership, friendship, activity groups, etc. (FMC)

125. COORDINATION OF FEDERAL, STATE, AND LOCAL PERSONAL INCOME TAXES

Main Investigator: Taxation and Finance Section.

Status of Research and Publications: Research completed. Publication as Commission report scheduled for early 1966.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: 12:1-124.

Research Problem. A policy oriented study concerning the extent to which states should be urged to make greater use of the personal income tax, and whether or not the federal government should grant preferential tax treatment for state and local personal income tax payments as an incentive to greater state use of the income tax. Research also included policy issues of a more technical nature such as (1) the extent to which the states should go in conforming their personal income tax laws to the Federal Internal Revenue Code provisions; (2) the feasibility of federal collection of state income taxes; (3) the resolution of interstate personal income tax difficulties, particularly with respect to taxation of non-residents and uniform definition of residency; and (4) state policy governing local taxation of personal income.

Hypothesis. Income taxation at several levels can and should be forged into an integrated fiscal instrument.

Method of Study. An analysis of the institutional, administrative, economic, and fiscal relationships between and among federal, state, and local income tax jurisdictions and the import for national policy objectives.

Major Findings. (1) From the standpoint of both revenue growth potential and equitable treatment of taxpayers, the personal income tax stands out as a superior revenue instrument. (2) The extensive use of the federal personal income tax since 1940 has retarded the state personal income tax movement, and forced state and local governments to place primary reliance on regressive and relatively inelastic consumption and property taxes. (3) It is clearly in the national interest to pursue policies which will both increase revenue elasticity of the state tax systems and minimize the state and local tax burden borne by low income persons. (4) Federal-state tax coordination to date has strengthened the state enforcement process because federal taxpayer information is now exchanged with state tax departments. However far less progress has been made in reducing taxpayer inconvenience and compliance costs because many state income tax laws do not conform closely to the Federal Code provisions and no attempt has been made to develop a unified system that would enable the taxpayer to satisfy both federal and state liabilities with a single return.

On the basis of these findings, the Advisory Commission set forth seven specific policy recommendations. (1) States should give early and careful consideration to incorporating the personal income tax into their tax systems and those states presently employing a relatively ineffective income tax, should strengthen it. (2) To neutralize the deterrent effect of federal personal income taxation, the Congress should amend the Internal Revenue Code on a prospective basis to give federal income taxpayers an option to either (a) continue itemizing their income tax payments to state and local governments or (b) claim a substantial percentage of such payments as a credit against their federal income tax liability. (3) The states should endeavor to bring their income tax laws into harmony with the federal definition of adjusted gross income. (4) The Congress should authorize the Internal Revenue Service and the legislatures of the states should authorize their governors, to enter into mutually acceptable agreements for experimentation with federal collection of state income taxes. (5) The states should continue to allow credits to their residents for personal income taxes they pay to other states and the states that now allow a nonresident credit should repeal such nonresident provision. (6) The states should adopt a uniform definition of residence. (7) The taxation of personal income should be at the state rather than the local level, but if local income taxes are also levied they should be in the form of a "piggy-back" tax to be administered with the state tax, and if only local income taxes are levied they should be limited to large taxing areas under uniformly applicable rules as to taxpayers, tax rates, tax base, etc., with provision for state technical assistance in their administration and enforcement. (NB)

126. INTERGOVERNMENTAL RELATIONS IN THE POVERTY PROGRAM

Main Investigators: Albert J. Richter and Robert A. Aleshire.

Status of Research and Publications: In process.

Agency: Advisory Commission on Intergovernmental Relations.

Previous Digest Report: None.

Research Problem. Study the intergovernmental features of programs initiated under the Economic Opportunity Act of 1964, as amended, and certain other federal programs that bear directly on the administration of the Act. The role played by federal, state, and local governments in each of the programs established by the Act will be examined to identify ways in which each government can most effectively contribute to achieving the objectives of the Act.

Method of Study. Evaluation of the extent to which each level of government is able to marshal its unique resources; identification of the ways in which intergovernmental friction among and between levels of governments and private institutions can be minimized. Emphasis will be on evaluation of governmental and inter-governmental machinery employed rather than on substantive provisions of the Act or the national objectives established by Congress. (NB)

127. POTENTIAL REPLACEMENT OF POPULATION OF WORKING AGE, 1960-70 DECADE, IN RURAL AREAS OF THE U.S.

Main Investigators: Gladys K. Bowles and Calvin L. Beale.

Status of Research and Publications: Computational work completed.
Bulletin to be published in 1966.

Agency: U. S. Department of Agriculture, Economic Research Service,
Economic Development Division, Human Resources Branch.

Previous Digest Report: None.

Research Problem. To analyze variations in the potential replacement of the total rural, rural-nonfarm, and rural-farm male population of working age during the 1960-70 decade among counties and other geographical, political, and economic areas of the U. S.; to isolate factors associated with these differences.

Previous Relevant Research. Potential replacement measures for rural-farm males for earlier decades published in the cooperative report, Gladys K. Bowles and Conrad Taeuber, Rural-Farm Males Entering and Leaving Working Ages, 1940-50 and 1950-60: Replacement Ratios and Rates. Farm Population, Series Census-AMS (P-27) No. 22, U. S. Department of Commerce, Bureau of the Census and U. S. Department of Agriculture, Agricultural Marketing Service, August, 1956.

Method of Study. Utilizing population data from 1960 Census of Population and survival and death ratios based on life table data of the National Vital Statistics Division, Department of Health, Education, and Welfare, estimates were derived of the number of entrants (persons entering the working age through maturation) and the number of departures (persons leaving the working age through death or retirement) for each specified working-age group. Replacement ratios and rates based on the relationship between entrants, departures, and the initial size of the working-age group were computed.

Major Findings. During the 1960-70 decade, about 3.0 million rural men of working age, 20-64 years, will die or reach retirement age, and about 5.3 million rural men will reach the working age to replace them. This yields a replacement ratio of about 177 men for every 100 who die or reach retirement age. If there were no migration to or from the rural population between 1960 and 1970, and if the number of job opportunities were to remain approximately the same as in 1960, only about 56 percent of the young men reaching working age would find economic opportunity by replacing older men in the rural population. The rural working-age group would be increased by 2.3 million men at a replacement rate of 17.1 percent of the group for the decade. The replacement ratios for the farm and nonfarm groups in the rural population were 160 and 184, respectively. The replacement rates for these residence categories were 16.7 and 17.3 percent, respectively. Replacement ratios and rates are considerably higher among nonwhite than white rural males. (GKB and CLB)

128. GROWTH PATTERNS IN EMPLOYMENT BY COUNTY, 1940-1950 AND 1950-1960

Main Investigator: Lowell D. Ashby.

Status of Research and Publications: In process of publication in an 8-volume series, one for each of these regions: New England, Mideast, Great Lakes, Plains, Southeast, Southwest, Rocky Mountain, Far West.

Agency: U. S. Department of Commerce, Office of Business Economics, Division of Regional Economics.

Previous Digest Report: 12:1, p. 107.

Research Problem. To measure the differences in the rates of employment growth in counties, states, and regions from that in the United States as a whole.

Previous Relevant Research. Lowell D. Ashby, "The Geographical Redistribution of Employment: An Examination of the Elements of Change," Survey of Current Business, Vol. 44, No. 10, October, 1964, pp. 13-20; Edgar S. Dunn, Jr., "A Statistical and Analytical Technique for Regional Analysis," The Regional Science Association, Papers and

Proceedings, Vol. VI, 1960, pp. 97-112; Robert E. Graham, Jr., "Factors Underlying Changes in the Geographic Distribution of Income," Survey of Current Business, Vol. 44, No. 4, April, 1964, pp. 15-30, 32.

Hypothesis. That local area or regional employment growth patterns can be explained in terms of overall national growth rates, rates of growth for national industries, and local area competitive performance in the various industries.

Method of Study. Local area employment changes (as measured by the Censuses of Population, 1940, 1950, and 1960) are analyzed into national growth, industrial mix, and regional share components. Local areas are classified according to similarity of employment growth pattern.

Major Findings. (1) The importance of the industrial mix component of employment change is decreasing relative to that of the regional share component. This appears to be due to the fact that the industrial structures of the local areas are becoming, in general, more homogeneous. (2) While the distribution of local areas among employment growth patterns appears quite stable, decade to decade, there is considerable change in the growth orientation of individual areas as they proceed through their developmental life cycles. (LDA)

129. EFFECTS OF HIGHWAY INVESTMENT ON LOCAL ECONOMIES

Main Investigator: Floyd I. Thiel.

Status of Research and Publications: Second year of a 5-year program. Work being done in the Bureau, under contract, and more than 80 state highway planning projects. Progress reported in the principal subject areas as follows: (1) Economic Consequences of Highway Development: Report published entitled "Highways and Economic and Social Changes," summarizing results of more than 100 highway impact studies. During the past year, 27 studies of economic consequences of highway improvements were completed, and 44 studies are in progress. Among those completed were bypass studies in Indiana, Iowa, Missouri, South Carolina, Texas, and Washington. (2) Analysis and Evaluation of Land Acquisition: Study recently completed by University of Illinois, dealing with use of air space under highways. A cooperative program of state highway departments and the Bureau has produced a "Severance Effects Bank," containing, at present, 2,400 sales of remainder parcels. (3) Interchange Development and Land Use Control: Six studies completed during the year.

Agency: U. S. Bureau of Public Roads.

Previous Digest Report: 11:2-125.

Major Findings. Findings of bypass studies generally typical of other such studies: (1) The expected difficulties of bypassed cities were exaggerated. (2) Transient businesses depend upon local trade more than is realized. (3) Bypassing alleviated traffic congestion. A Texas restudy of a three-mile Interstate System bypass found that land values increased in both the study and control areas between the "before" and "after" periods, but that the increase was much greater in the study area.

A Louisiana study revealed that the economic effect of one-way streets on business activity was generally beneficial. An Alabama study found that the radius of the trade area of one city can be expected to expand by approximately 50% following completion of the Interstate System. A Michigan study established that commercial and industrial use can benefit from locating near an elevated highway even though that location may not be suitable for residence. A Connecticut study showed that a modern highway such as the Connecticut Turnpike can spark redevelopment of a neglected area.

An Illinois study that applied regression analysis to the appraisal of farm lands partially taken for highways describes a new technique for arriving at farm land values that is useful for the "before" situation in highway takings. A study of air rights and parking provides general criteria to determine when parking under freeways is economically feasible.

Severance damage studies show that for the entire file of "all" remainder sales from all reporting states, the average recovery rate (ratio of sale price per unit, individually for each sale, to the per-unit value at time of taking, multiplied by 100) was 332%. The average recovery rate of "all separated" remainder sales was 349%; of "all isolated" remainder sales, 348%; and "all land locked" remainder sales, 163%. The average recovery rate on sales of remainder parcels at or near an interchange was 554, indicative of the beneficial socio-economic effect of the new Interstate highway improvements.

Studies of interchange development and land use control permit approximation of space needs for highway-user services, particularly service stations. Also mathematical and statistical models have been developed to predict the nature and amount of development near nonurban interchanges. Preliminary findings from such a model have been used in combination with a microregional input-output model to predict the effects of a highway (the Keystone Shortway) on a county. (RFB)

130. ECONOMIC CONSEQUENCES TO THE ROAD USER OF HIGHWAY TRANSPORTATION

Main Investigator: Robley Winfrey.

Status of Research and Publications: A continuing study begun in 1964. A constituent contract study of the role of third-structure taxes is being prepared for publication by the University of Mississippi.

Agency: U. S. Bureau of Public Roads.

Previous Digest Report: 11:2-123. (RFB)

131. UNDERLYING FACTORS IN URBAN TRANSPORTATION ANALYSIS

Main Investigators: Edmond L. Kanwit and Walter H. Bottiny.

Status of Research and Publications: In process. Report to be published, Robert Paterson (University of Missouri), "Forecasting Techniques for Determining the Potential Demand for Highways," Papers presented before the Highway Research Board to be published; Edmond L. Kanwit and David M. Glancy, "The Use of Metropolitan Area Census Data for Transportation Planning," and Walter H. Bottiny, "Trends in Automobile Ownership and Indicators of Saturation."

Agency: U. S. Bureau of Public Roads.

Previous Digest Report: 11:2-127.

Method of Study. Some analyses are being made to determine, among other things whether urban areas may be grouped into classes that would aid in transportation research and planning. They include the study of (1) economic function as indicated by the distribution of industrial employment, (2) change in attraction to the CBD as indicated by shifts in retail sales between central city and suburbs, and (3) urban area characteristics such as personal income, relative age of the area, and population distribution. (RFB)

132. FACTORS IN CHOICE OF TRANSPORTATION

Main Investigator: Edmond L. Kanwit.

Status of Research and Publications: A study of factors determining modal choice for major trip purposes being completed by University of Maryland under direction of Charles A. Taff and George M. Smerk. A study in process deals with the determination of characteristics, capacity, and requirements of bus transportation in metropolitan areas of moderate size. Other attitude surveys to be conducted as part of larger studies in Connecticut, Rhode Island, and possibly New York.

Agency: U. S. Bureau of Public Roads, University of Maryland, Wilbur Smith and Associates, and others.

Previous Digest Report: 11:2-124. (RFB)

133. MAXIMUM DESIRABLE DIMENSIONS AND WEIGHTS OF MOTOR VEHICLES

Main Investigator: Robley Winfrey.

Status of Research and Publications: A continuing study begun in 1962. Interim publication, "Maximum Desirable Dimensions and Weights of Vehicles Operated on the Federal-Aid Systems," House Document No. 354, 88th Congress, 2nd Session, U. S. Government Printing Office, Washington, D. C., 1964.

Agency: U. S. Bureau of Public Roads.

Previous Digest Report: None.

Research Problem. Establish the bases and factors upon which decisions concerning maximum desirable dimensions and weights of motor vehicles can be made. (RFB)

134. LOCAL ADMINISTRATION AND ENFORCEMENT OF HOUSING CODES

Main Investigator: Barnet Lieberman.

Status of Research and Publications: In process.

Agency: Department of Housing and Urban Development, Office of Program Policy.

Previous Digest Report: None.

Research Problem. To prepare a guide or handbook on the administration and enforcement of local housing codes.

Method of Study. A study and analysis of literature on this subject, the views and opinions of public officials in at least 10 cities, and the housing codes of these cities. (MJS)

135. LONG-RANGE ECONOMIC STUDY OF OPPORTUNITIES FOR SALINE WATER CONVERSION IN THE U. S.

Main Investigators: W. L. Patterson and H. J. Lobb.

Status of Research and Publications: In process.

Agency: U. S. Department of the Interior, Office of Saline Water, under contract with Black and Veatch, Consulting Engineers (Kansas City, Missouri).

Previous Digest Report: None.

Research Problem. To determine where in the United States, and when between now and the year 2,000, saline water conversion will be economically feasible; what desalting processes and what size conversion plants will present a cost advantage.

Method of Study. Phase I: About 800 cities and towns having a population of 1,000 or more were chosen for investigation, by means of selected criteria and a questionnaire mailed to 3,000 cities. Phase II: Field investigations of 180 communities. Phase III: Screening some 600 remaining communities and on-site investigation of 100. In each instance of a water-short community, it is necessary to determine which of several alternate conventional fresh water sources would be least expensive to develop. The cost per 1,000 gallons of the finished water must exceed the cost of saline water converted through the most appropriate and cheapest desalting process. If that is the case, the community is a candidate for saline water conversion. (WLP)

136. PARKING REQUIREMENTS FOR SHOPPING CENTERS

Main Investigators: Alan M. Voorhees and Associates.

Status of Research and Publications: Completed. Published November, 1965. "Parking Requirements for Shopping Centers," Technical Bulletin 53, 123 pp., \$4.00 per copy. Available from the Urban Land Institute, 1200 18th Street, N. W., Washington, D. C. 20036.

Agency: Urban Land Institute, under sponsorship of Research Foundation of the International Council of Shopping Centers.

Previous Digest Report: None.

Research Problem. To determine how many parking spaces shopping centers should provide for customer use.

Method of Study. A detailed analysis was made of parking lot use during the pre-Christmas shopping period of 1964 in 270 shopping centers throughout the United States and Canada. The centers were of varying types, sizes, and geographical distribution. Each center counted empty parking spaces in its parking lot twice each day--from 2:30 to 3:30 in the afternoon and 7:00 to 8:00 in the evening, the busiest shopping hours of the day. The results were correlated with basic information on each center--size, age, and location; number of parking spaces used by employees of the center; sales volume; types of customers; zoning requirements.

Major Findings. (1) Provision of 5.5 car parking spaces per 1,000 square feet of gross leasable area in a shopping center is sufficient to meet customer demand at most centers and should be used as the standard in developing new centers of all sizes in suburban areas that will depend largely upon drive-in trade. The standard includes provisions for parking space for employees in the center and a 10% reserve to enable free traffic movement within the parking area. (2) Shopping centers can provide office space totaling up to 20% of the gross retail area in the complex without noticeably increasing the demand at peak parking hours.

(3) Centers, such as in-city retail complexes with significant volumes of walk-in customers or those relying on mass transportation facilities, can reduce the recommended standard proportionately.

(4) Parking needs in existing centers have generally been overestimated by developers, major tenants, and mortgage lenders.

(5) Zoning ordinances in many communities require a substantially greater amount of parking space than is found to be necessary in actual practice. Of the centers analyzed, 108 reported on zoning ordinances. In 56% of these cases, developers were being required to provide more parking space than is being proposed here. At the same time, the ULI report recommended that the shopping center, industry, and zoning bodies replace the long-used parking ratio of measurement (which relates area devoted to parking to the square footage of building area) with the new and more accurate parking index (number of car parking spaces provided per 1,000 square feet of gross leasable area). (JRM)

137. IMPACT OF SLUM OWNER RELOCATION ON SLUM FORMATION

Main Investigator: Daniel R. Mandelker.

Status of Research and Publications: In process.

Agency: Washington University, under sponsorship of U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. To study and analyze the impact of slum owner relocation on slum formation.

Hypothesis. The present structure of the eminent domain laws provides venture capital to slum owners who are bought out of slum clearance areas, and who use this capital to acquire new properties in other slum areas, or in deteriorating areas which are then turned into slums. This hypothesis further assumes that slum owners constitute a largely segregable class of entrepreneurs, who invest in slum property either out of habit or choice.

Method of Study. Study will reconstruct the subsequent history of slum owners who were bought out of a large slum clearance area in the city of St. Louis. Verification of this hypothesis should encourage similar studies elsewhere, and may ultimately lead to corrective measures both in state enabling legislation and in the controls under which the federal slum clearance program is operated. (DRM)

138. A STUDY OF TECHNIQUES FOR MEASURING URBAN RESIDENTIAL BLIGHT

Main Investigators: Roger Montgomery and Daniel R. Mandelker.

Status of Research and Publications: In process.

Agency: Washington University, under sponsorship of U. S. Public Health Service.

Previous Digest Report: None.

Research Problem. A comprehensive evaluation of existing techniques for measuring residential urban blight; identification of the variables for a blight-rating scale that can be more sensitive in identifying blighted areas and in indicating appropriate programs of public action.

Hypothesis. Standard techniques for measuring and identifying urban and residential blight are based on the blight-rating scale of the American Public Health Association which was developed twenty years ago. With an increase in public programs for alleviating slum conditions, the APHA scale and similar techniques have been used to justify a wide range of public actions such as residential conservation and renewal, the acquisition of sites for public housing, and urban renewal projects. The original blight-rating scale was not developed with so many alternatives in mind, and twenty years of experience has revealed deficiencies in the conventional measuring techniques. A symptom of the deficiencies is found in the occasional conflicts over blight measurement in urban renewal.

Method of Study. Evaluation of APHA and other methods in light of recent evidence concerning the relationship between the physical environment and social pathologies; examination of operational uses of blight-rating measures, and the legal basis and historical evolution of methods of slum treatment; critical evaluation of measurement techniques not only as a means of identifying housing deterioration, but as a method of selecting alternative treatments for slum conditions. Initial studies will examine the use of blight measurement techniques in Community Renewal Programs throughout the country, and the development of the blight concept in the history of the housing reform movement and in legal measures for dealing with the slum problem. (DRM)

139. CENTRAL CITY FUNCTIONS

Main Investigators: Charles Tiebout and Warren Seyfried.

Status of Research and Publications: In process.

Agency: University of Washington, under sponsorship of Department of Housing and Urban Development.

Previous Digest Report: None.

Research Problem and Method. To identify those economic functions which can remain and grow in a central city as the metropolitan area expands. These economic functions are being correlated with different factors, such as population growth of the entire metropolitan area, per capita income, and available transportation

facilities, to establish the conditions under which cleared or vacant land would have a sound market for specific uses in the central city. (MJS)

140. WATER RIGHTS AND THE FORMULATION OF POLICIES AND PROGRAMS AFFECTING WATER USE AND DISPOSITION

Main Investigator: R. J. Penn.

Status of Research and Publications: In process.

Agency: University of Wisconsin, Agricultural Experiment Station, under sponsorship of U. S. Department of Agriculture, Co-operative State Experiment Station Service.

Previous Digest Report: None.

Research Problem. (1) To study the impact of existing water policies, law, and procedures on water users, particularly farmers and urban industries and residents; (2) analyze recent proposals for changes in water policy, law, and administration, and their expected economic and legal consequences if adopted, and (3) construct proposals for changing water law and administrative procedures to secure maximum economic benefits for farmers, landowners, and urban industries, while safeguarding the public interest in water supply and recreational resources.

Method of Study. (1) Analyze existing water rules. This will include review of statutes, court decisions, and procedures and operations of administrative agencies. (2) Investigate inter-relationships between land and water use in a specific geographic area. (3) Analyze recent proposals for modernizing rules for water use, including analysis of background studies, hearing records, and, in specific geographic areas, the impact that might be anticipated. (RJP)

141. POPULATION CHANGES IN SMALL TOWNS

Main Investigator: G. V. Fuguitt.

Status of Research and Publications: In process.

Agency: University of Wisconsin, College of Agriculture, Department of Rural Sociology, under sponsorship of National Science Foundation.

Previous Digest Report: None.

Research Problem. To consider changes in size over time of small towns, particularly incorporated places under 10,000 population, in specified census years.

Hypotheses. Although urbanization is receiving much deserved attention, the place of the small town in this process has been neglected. Knowledge about small towns would contribute to our understanding of urbanization, for the growth and decline of small towns is part of the process of urban concentration and de-concentration. Furthermore, it would contribute to our understanding of how cities, towns, and the open country are interrelated.

Method of Study. Using U. S. Census data, the project will (1) study the small town in the overall settlement structure of the U. S. since 1900, distinguishing between changes in individual places and changes in population size categories, over time; (2) relate the growth and decline of small towns, especially since 1940, to position in a system of cities, as indicated by location in terms of other centers, by size and governmental status, population concentration within and between subregions; and (3) compare selected population characteristics of growing and declining small towns, considering their subregional locations and positions relative to other centers. (CVF)

142. COHORT MIGRATION AND URBANIZATION

Main Investigators: K. E. Taeuber and Alma F. Taeuber.

Status of Research and Publications: In process.

Agency: University of Wisconsin, Department of Sociology, under sponsorship of National Science Foundation.

Previous Digest Report: None.

Research Problem. To examine the specific patterns of migration by which, in three generations, the United States was transformed from a society of isolated farm and village settlements to one dominated by an interlocking metropolitan system of cities.

Method of Study. Examination of retrospective residence histories for a national sample of persons living in the United States in 1958, collected by the Bureau of the Census as a supplement to their monthly Current Population Survey. (These are the first migration data for the United States which permit tracing the pattern of successive moves within the lifetime of each individual.) Direct investigation of possible stage migrations--what is the nature and frequency of specific residential sequences in the movement from rural and village locations to metropolitan areas? Residential redistribution of specific cohorts of persons--those born in a given period--can be traced as they pass through the life cycle, and changing patterns of redistribution according to age of migrants can be distinguished from those due to changing historical circumstances. (KET)

143. A GENERAL THEORY OF LATIN AMERICAN URBAN HISTORY, EMPHASIZING ITS ECOLOGICAL AND SOCIOLOGICAL ASPECTS

Main Investigator: Richard M. Morse.

Status of Research and Publications: In process.

Agency: Yale University, Department of History, under sponsorship of Guggenheim Memorial Foundation.

Previous Digest Report: None.

Research Problem. To frame a general theory of Latin American urban history that will emphasize ecological and sociological aspects. Comparative reference will be made to urban development in the Roman Empire, in medieval Europe, in the United States, and in contemporary underdeveloped areas other than Latin America.

Hypotheses. The early settlement patterns of Latin America had, by and large, a municipal point of origin. During the colonial period, however, rural institutions developed to an important extent outside the radius of municipal control. Under such conditions, rural social organization was thrown back upon extended-family, compadrazgo, or neighborhood units. These were reminiscent of the hermandad or adfratatio of early medieval Europe, a social unit which at the time of the discovery of America had given way to a more complex type of community organization. As the Latin American city entered its centripetal phase in the 19th century, it began to reap as it had sown. It drew massively from the rural areas, and the migrants depended heavily upon traditional or impromptu primary group organizations for their accommodation to urban life. Thus the city, which imparted an individualistic, exploitative spirit to the settling of the land, exhibits internally the traces of agrarian, familialistic social structure. Any attempted reconstruction of the Latin American city which relies upon secondary associations to the neglect of primary groups would seem, therefore, to have only tenuous chances of success. (RMM)

144. PLANNING URBAN PLACES FOR LIVING

Main Investigator: Serge Chermayeff.

Status of Research and Publications: In process.

Agency: Yale University, School of Art and Architecture, under sponsorship of Twentieth Century Fund.

Previous Digest Report: None.

Research Problem. Modern cities are becoming shapeless for lack of an informing principle. But no such principle will be forthcoming, and no action will be taken, until the processes of design

are themselves informed and controlled by a recognition of new realities. This study will discuss the functions of public and private places and attempt to arrive at principles by which the quality of urban life can be consciously developed even in the large-scale environment of the future. (LF)

CANADA

145. RETAIL STRUCTURE OF THE URBAN CORE: STUDIES OF VANCOUVER B. C.

Main Investigators: Walter G. Hardwick and Roger Leigh.

Status of Research and Publications: In process.

Agency: University of British Columbia, Department of Geography-Urban Core Project, under sponsorship of Canadian Council on Urban and Regional Research.

Previous Digest Report: None.

Research Problem and Hypothesis. The urban core has often been described as "Main Street" and its vitality measured by the success of downtown retailing. Many theoretical notions from ecology and central place theory which currently underpin explanations of urban core structure and operations turn upon analysis of central retailing activities. It is argued here that through the application of concepts from marketing and sociology to the geographic analysis of intra-city retail structure, current generalizations can be rounded out, clarified, and augmented. Specifically, the influence of social class on the demand for goods and location of retailing is examined along with the implications of the multifunctional nature of the C. B. D.

Method of Study. Data collection methods included in-store and household interviews, a search of credit records and traffic data.

Major Findings. C. B. D. stores have selective and morphologically sectoral, not city-wide hinterlands; as stores become more specialized their market relations become increasingly selective; groups of stores, becoming specialized, have sectoral hinterlands; daytime workforce is very significant to maintenance of several classes of establishment. Using Vancouver data it would appear that retailing is becoming an ancilliary activity rather than a prime propellant of urban core in regional capitals. (WGH)

146. SPECIALTY RETAILING: A GEOGRAPHIC ANALYSIS

Main Investigators: Roger Leigh and W. G. Hardwick.

Status of Research and Publications: Completed. To be published as Occasional Papers in Geography #9, Fall, 1965.

Agency: University of British Columbia, Department of Geography,
under sponsorship of Canadian Council on Urban and Regional
Research.

Previous Digest Report: None.

Research Problem. Spatial characteristics of specialty
(high order) retail trade within Vancouver, B. C. Conclusions are
presumed applicable to most contemporary North American cities of
similar size.

Method of Study. Examination of pertinent literature; inter-
views with merchants and managers of stores in Vancouver defined as
"high order," to establish reasons for the choice of particular store
locations and to discuss methods of business operation; analysis of
store hinterlands using credit records, sales slips, and questionnaire
derived data.

Major Findings. (1) Specialty (high order) retailing tends
toward monopolistic competition, since merchants attempt to attract
customers through "product differentiation" and "image projection."
This permits locational flexibility, not central fixation. (2) The
normal background for retail activity in North America is a pluralistic,
socio-economic environment. Consequently, retail stores--specialty
stores, in particular--are likely to appeal to socially distinctive
and areally localized groups for patronage. This results in selective
and morphologically sectoral (not indiscriminantly city-wide) market
hinterlands for specialty stores. Recognition of these characteristics,
and the subsequent welding of traditional geographical theories
(ecological and central place theories) with insights from economic
and sociological theory, enriches traditional geographical ideas
in a context where existing ideas had hitherto been obscure or mis-
leading. (WGH)

147. INTERNATIONAL INQUIRY ON CONSTITUTION, ORGANIZATION, AND ADMINISTRATION
OF CITIES

Main Investigator: Julian G. Suski.

Status of Research and Publications: Research completed. Publica-
tion of entire project results postponed owing to the death
of the Executive Director of the Federation and subsequent
reorganization of Federation authorities. However, a series
of articles, "City Government: International Comparison of
Administration," resulting indirectly from this research,
is being written. An article titled "The Structure of Municipal
Government in Canada and Europe" published in Canadian Public
Administration, Journal of the Institute of Public Administra-
tion, September, 1965, Vol. VIII, No. 3, 18 pp. and comparative
table. The article characterizes the status of Canadian
Municipal Organization, compares it with the municipal or-
ganizations of 6 European countries, and offers conclusions
aimed at showing the necessity of reforming Canadian municipal
structure.

Agency: Canadian Federation of Mayors and Municipalities; The Canadian Council on Urban and Regional Research.

Previous Digest Report: 12:1-145. (JGS)

148. THE RELATIVITY OF POVERTY IN THE MARITIME PROVINCES

Main Investigator: Pierre-Yves Pepin.

Status of Research and Publications: In process. Related research, concerning regional planning methods in Canada, completed and reported in "Necessary Conditions for a Land Management Program in Quebec," Commerce, Montreal, May, 1965, Vol. 6, No. 5, pp. 90-99; "Formulation of Regional Planning Methods," Plan, Toronto, Vol. 6, No. 1, 1965, pp. 36-50.

Agency: The University of Montreal, Institute of Urban Affairs, under sponsorship of A. R. D. A. Administration, Department of Forestry, Ottawa, Canada.

Previous Digest Report: None.

Research Problem. The Canadian government passed a law to introduce modern methods of efficiency into the rural economy and to increase the welfare of its people as a whole (Agricultural Rehabilitation and Development Act, June 22, 1961). Several areas in eastern Canada contain rural populations with abnormally low standards of living. The A. R. D. A. has become an essential tool with which to combat this problem. The aim, among others, is to determine the nature of rural poverty and to determine its extent in certain pre-selected areas, by statistical procedures.

Method of Study. Five regions in the Maritimes (with traditional economies), typical of rural poverty areas, were chosen. The regions were studied for two months. Finally, these five regions were referred to simply as the Maritimes.

Major Findings. We have set forth the hypothesis that:
(1) The idea of rural poverty varies greatly according to the region.
(2) A thorough understanding of each region is essential in order to work out effective solutions. (3) This understanding is obtained by examining the environment, the relationship between the means of livelihood and the standard of living.

The relationship between the standard of living and the traditional means of livelihood (fishing, agriculture, forestry) is constant in the poverty areas. Available statistics do not give a true picture of rural poverty: in some cases it is underestimated, in others it is overestimated. The distortion is greatest between actual poverty, as it is felt, and poverty as defined by the socio-economic standards of the federal government. (PYP)

NEW URBAN AND REGIONAL RESEARCH AND TRAINING PROGRAMS

Work Program, United Nations Centre for Housing, Building and Planning

A recent United Nations document (E/4124 E/C.6/46, Economic and Social Council, Official Records: Forty-First Session, Supplement No. 9) reports on the third session of the Committee on Housing, Building and Planning which was held in New York September 7-20, 1965. In addition to reviewing progress during the first half of the United Nations Development Decade, delegates from the twenty nations comprising the Committee also reviewed a number of research reports, adopted three draft resolutions for action by the Economic and Social Council, and established priorities for the work program of the recently established United Nations Centre for Housing, Building and Planning.

The deliberations of the Committee were marked by a sense of urgency clearly revealed in the measured words of the report. "The Committee noted with grave concern," says the report, "that despite the leadership provided by the United Nations and the mounting pre-occupation of several Governments with the basic problems of housing policy and programming, the over-all housing situation in the developing continents of Africa, Asia and Latin America had continued to deteriorate and reached a stage of crisis towards the close of the first half of the Development Decade. The slow rate of economic progress, the rise in real incomes and the fast growth of population, particularly in the urban areas, coupled with lack of finance, shortage of building materials, spiralling land prices and high building costs, had continued to widen the gap between the supply and demand of houses. Very few countries in the developing regions had been able to raise their levels of annual housing production beyond two to three dwelling units per 1,000 population, and this rate was insufficient even to replace the units being lost due to obsolescence. In consequence, millions of low-income families were increasingly forced to live under sub-human conditions in slums or swell the ranks of squatters and shanty dwellers.

"The Committee realized that the continuously deteriorating housing situation in the developing continents had now reached a crisis, and there was insufficient recognition of this crisis at the national as well as international level. The Committee, therefore, considered it necessary to highlight the gravity of the situation and to reiterate the recommendations embodied in resolution 1024A (XXXVII) of 11 August, 1964, adopted by the Economic and Social Council at its thirty-seventh session, to the effect that Member States should assume a major role in the solution of housing and urbanization problems and to that end arrange to allocate necessary resources within the framework of the national plans for socio-economic development; establish suitable organizations in charge of housing and physical planning at the national, regional and local levels; develop building material and construction industry along with the establishment of an industrial base; improve building and design efficiency and lower costs; eliminate speculation

in land and ensure its rational and speedy use for housing and for balanced urban and rural development; and train technical personnel and workers in sufficient numbers to implement the programmes."

Determination of priorities for the Centre's work program was difficult, since the number of worthy projects which could help to cope with the crisis as the Committee saw it considerably exceeded available and foreseeable resources. A five point program eventually emerged, listing activities of highest priority, to be undertaken as soon as possible. Highlights of the program, abstracted from the Committee's report, are as follows:

A. CONTINUING ACTIVITIES

1. Technical co-operation. Continue to provide substantive advice to the Bureau of Technical Assistance Operations in connexion with the servicing of missions, pilot projects, seminars, conferences and study tours; to the Bureau of Operations of the Special Fund in connexion with the initiation, development, administration, and evaluation of Special Fund projects in this field; and to various other agencies. Working closely with other United Nations Offices, provide advisory services in the fields of housing, finance, policy and administration to enable the Centre to become a connecting link between technical assistance, preinvestment, and financing and development programmes of international and national agencies.

2. The collection and evaluation of data for biennial surveys. Preparation of a systematic methodology and programme for qualitative and quantitative evaluations of world housing and environmental living conditions.

3. The systematic collection, evaluation and exchange of information to keep survey, research, training, evaluation and documentation programmes in housing, building and physical planning under continual review.

B. PHYSICAL PLANNING

1. Case studies in regional planning and development. This programme will be used as a means of developing methods and techniques that could be utilized in developing countries in promoting balanced development and achieving optimum patterns of rural and urban human settlements and production activities.

2. Seminars on development policies and planning in relation to urbanization. The preparation of case studies on decentralization policies, as a means of dealing with the social, economic and physical problems of urbanization and the standards for the resettlement of squatters. These studies are to be used as discussion papers for an inter-regional seminar in Pittsburgh,

United States, in late 1966, and for an inter-regional seminar to be convened in Romania in 1968.

3. A regional seminar on planning and development of new towns will be convened in Nagoya, Japan, at a date yet to be determined, for the benefit of countries in the Far East. The development of new towns and urban land policies will be reviewed within the context of metropolitan and regional planning.
4. Studies on urban land use and land control will be undertaken, and measures and undesirable land practices reviewed.
5. Expert meetings on physical planning in national development. A series of regional seminars will be organized to review present economic and physical planning techniques and administrative arrangements for effective co-operation, and to make proposals on techniques that can be utilized in developing countries, to ensure a better integration of physical planning in national and regional economic development planning.
6. Study tours on community facilities and services in urban areas. Tours will be organized to enable technicians and public officials from developing countries to observe and review planning techniques and standards for the provision of community facilities as adapted to the conditions prevailing in their countries. The first tour is planned in the USSR for 1967.

C. HOUSING

1. A meeting of experts representing all geographic regions with high-level experience in national and international development finance, in housing and community facilities in developing countries and in the finance of housing and community facilities, to explore practical ways and means of increasing financial resources for investment, and to recommend a programme of action.
2. Social aspects of housing. Study countries which have made progress in solving the problems of housing and urban development, paying particular attention to such aspects as: an appropriate programme of economic development in urban and rural areas, leading to an accelerated increase of the standard of living and providing appropriate dwellings for all the population without discrimination; initiation and construction of housing for low-income families; keeping rents within a reasonable share of family incomes; improvement of existing housing, clearance of slums, etc.
3. Trends in house design. This study will relate the basic principles of design that contribute to reducing building costs, and the climatic and other specific requirements to the cultural,

social and economic factors which are involved in the production of acceptable housing and environmental conditions, as well as in the management and maintenance of such dwellings.

D. BUILDING

1. Study the economic and technical aspects of the construction industry, with particular emphasis on the problems posed by the adaptation of industrialized processes to the conditions prevailing in developing countries. Results will be discussed at regional seminars and an inter-regional symposium.

2. Study traditional building methods as used in small-scale building operations in developing countries, with a view to improving or developing the techniques employed, the utilization of labour, the use of tools and equipment and the economic results.

3. The Centre will assist governments in formulating requests to the Special Fund for the financing of pre-investment surveys on the development of local building materials and traditional techniques.

4. It is proposed that a regional seminar on prefabrication of building be held in 1967 in Denmark for the benefit of countries in the Latin America region.

E. RESEARCH TRAINING AND INFORMATION

1. It is proposed to collect and evaluate information on plans and projections regarding training of personnel required for housing, building and physical planning activities in developing countries.

2. Pending establishment of an international institute for documentation of housing, building and planning, and as a background to its further activities, it is proposed to undertake a survey of research facilities in the field of housing, building and physical planning, to assist governments of developing countries in locating sources of information and documentation.

Further information concerning the work program of the Centre, as well as comments on research activities which would be highly useful to its program but which it currently lacks the resources to pursue, may be obtained from Mr. Ernest Weissmann, the Centre's director, at the United Nations, New York.

Urban America, Inc.

The American Planning and Civic Association was reorganized recently, and is now called Urban America, Inc. The change of name

emphasizes the organization's main thrust, a nationwide campaign of public education against urban ugliness in the United States. Harland Bartholomew, President of the Association for many years, was elected chairman; Stephen R. Currier, President; Philip R. Hammer, Acting Executive Director; and Victor Weingarten, Editor. A non-profit organization, Urban America has received a substantial grant from the Taconic Foundation of New York to help revitalize its activities.

The immediate objectives of its educational campaign are:

(1) to increase public awareness of growing urban blight; (2) increase community participation in setting standards of community design; (3) foster townscape design and professional training. To accomplish these objectives, an eight-point program has been established:

(1) Development of materials for school children which will provide education for visual appreciation of the environment. (2) Regional and national design conferences. A national conference to be held in an eastern city is scheduled for May, 1966. (3) Study and preparation of materials for the purpose of public education on local issues carefully selected because of their national significance. (4) Conferences and research on taxation as it affects design and preservation of open space through scenic easements, etc. (5) Urban America has acquired the professional educational journal, Architectural Forum, and plans to publish 10 issues a year. The Forum is designed to make architects aware of the best in architectural design and techniques, of the need for urban planning and related subjects. (6) Development of workable plans for design competitions with particular emphasis on buildings and plans which affect very large numbers of people and have attracted little design interest heretofore. (7) Operation of Urban America News Bureau to supply pertinent material to editors around the country in a monthly syndicated column. (8) Preparation and circulation of traveling exhibits in cooperation with the American Federation of Arts.

The organization's newsletter, Urban America News, is the successor to American Planning and Civic Comment. Members receive copies of both the newsletter and Architectural Forum. Annual membership is \$10.00 per year. Sustaining, Contributing, and Patron memberships are also available. For more information write to Urban America, Inc., 1413 K Street, N. W., Washington, D. C. 20005.

Division of Planning Research, American Institute of Planners

The Division of Planning Research of the American Institute of Planners was established in July, 1965 to consolidate and strengthen the Institute's involvement in research related to urban and regional planning. The new division is one of five such units into which most Institute activities were grouped at that time, the other four covering, respectively, planning practice, planning education, professional standards, and institute organization.

In the language of the "charge" which the AIP Board of Governors approved in October, 1965 at the annual conference in St. Louis, "...The Division of Planning Research is responsible for enhancing the effectiveness

of the planning profession through development of innovative concepts, substantive knowledge, procedures, specialized technical guidelines and normative criteria that pertain to comprehensive planning. The Division develops and oversees Institute efforts that help to (1) inventory the planning research currently underway; (2) identify and communicate the nature and relative urgency of research required by the planning profession; (3) bring about needed research; (4) disseminate the results of significant research to the profession; (5) link planning research with ongoing work in related scientific and professional disciplines and in governmental agencies; (6) provide basic data needed by planning practitioners; (7) provide systems for collection, storage and retrieval of information." The Division operates through a number of specialized standing and project committees, under the guidance of a broadly constituted Research Advisory Committee. Necessary staff services and day-to-day coordination and liaison are maintained by the AIP National Office.

At the St. Louis Conference the AIP Board of Governors approved an overall program of Divisional activities for 1965-67: among these activities are National Conference workshops and seminars; ad hoc workshops and seminars; technical surveys; preparation of technical background papers and proposals; and sponsorship of selected research projects. The Divisional program will also stress close and continuing cooperation with pertinent research efforts of federal agencies and universities, foundations, and professional societies.

Establishment of AIP's Planning Research Division coincided with Congressional action authorizing a greatly enlarged federal role in urban research. In light of these events the Division sponsored a session on federal urban research at the St. Louis Conference. It also transmitted to HHFA Administrator Weaver a paper recommending specific approaches to the implementation of Section 1102(b) of the 1965 Housing and Urban Development Act--the new "5%" research and demonstration program in comprehensive planning methodology.

Several Divisional committees are now working actively on specific projects, e.g., a survey of urban information systems, and a report to the U. S. Census Bureau on the 1970 Census needs of planners. It should be emphasized that the Division will be successful to the extent to which planners and persons in related disciplines participate in the work of the six specialized committees that have been authorized by the Board of Governors. Standing Committees include (1) Information Systems, (2) Statistical Series, (3) Plan-Making Techniques and (4) Plan-Implementation Devices. Project Committees include (1) Comprehensive Planning Process and (2) Planning Agency Management Procedures. Additional project committees will be established as occasions arise.

Comments, suggestions and participation are invited. Inquiries should be address to Willard B. Hansen, Chairman, AIP Division of Planning Research, Bureau of Community Planning, University of Illinois, 1202 West California, Urbana, Illinois 61801, or to David K. Hartley, Director of Institute Development, American Institute of Planners, 917 Fifteenth Street, N. W., Washington, D. C. 20005. (WBH)

Center for Urban Education, New York Area

In 1965, eight of the major educational institutions of the New York City area formed an independent, non-profit, research and development corporation, funded principally by the United States Office of Education, under the name Center for Urban Education. The member institutions are: Bank Street College of Education, Columbia University, Fordham University, New York Medical College, New York University, Teachers College of Columbia University, The City University of New York, and Yeshiva University. The Center will initiate and promote research and development in the problems of urban education and test its findings within city and suburban school systems. The fundamental objective of the Center is to contribute strategic knowledge and resources to the strengthening, improvement, and reconstruction of educational services of all kinds and at all levels within urban society. It works toward this goal in four ways: (1) by providing consultative services for research and development already in progress, both in member institutions and in the public school systems of the New York metropolitan area and initiating additional research where required; (2) by providing facilities, expert personnel, and dollar support for new research and innovation; (3) by giving maximum dissemination to the product of this research; and (4) by serving as a center of coordination between the academic community and the world of urban educational and other community services.

The Center's program is based on the work of four broad divisions: The Division of Educational Practices, responsible for the study of problems related to school administration, teacher training, and curriculum; The Division of Special Educational Practices, which places primary emphasis on developing research and program innovation in the area of the severely handicapped child who is physically handicapped, retarded, blind, deaf, or emotionally disturbed; The Division of Child Learning and Development, concerned with early experience as related to subsequent school performance, cognitive socialization and the role of affect in learning, teacher-pupil interaction and pupil performance, achievement motivation, and the development of moral and ethical values; and The Division of Community Research which focuses on problems concerned with the relation between urban society and education, i.e., school desegregation, effects of urban culture upon human learning and self-realization, the social aspects of student success or failure. Offices of the Center are at 33 West 42nd Street, New York, New York 10036.

Institute for Environmental Studies, University of Pennsylvania

In the spring of 1965, the University of Pennsylvania established the Institute for Environmental Studies to conduct a continuing program of study and research focussed on the nature and control of man's environment. The Institute consolidates and expands the programs of two predecessor institutes, the Institute for Urban Studies which was allied to the Department of City and Regional Planning, and the Institute for Architectural Research, allied to the Department of Architecture. In addition to University funds, the Institute is supported by gifts, grants, and contracts.

The program of the Institute is intended to involve faculty, staff, and graduate students from all divisions of the Graduate School of Fine Arts and any other appropriate department of the University. The Ph.D. programs in Architecture and City Planning are directly related to the facilities and activities of the Institute. To permit interchange of ideas and coordination of activities among persons having common interests in a general area of investigation, activities of the Institute are loosely organized into several research groups. The number and nature of these groups is intended to change as the interests and needs of the faculty and students might change. Currently, research projects and activities are being conducted in the following groups: Architecture and Building Research; Studies in Civic Design; Historical Studies; International Studies in Urban Planning; Studies on Legal and Governmental Aspects of Planning and Development Control; Research on Natural Sciences in Landscape Architecture and Regional Planning; Planning Sciences; Regional Planning Studies; Transportation Research; Studies on Urban Social Policy Planning; and Urban Studies. For additional information, contact Gerald A. P. Carrothers, Director of the Institute for Environmental Studies, University of Pennsylvania, Philadelphia.

BIBLIOGRAPHIES AND INFORMATION SERVICES

Science Information Exchange

Readers of the Digest, because they are research minded, and frequently engaged in research projects themselves, would do well to familiarize themselves with the services available from Science Information Exchange, 300 Madison National Bank Building, 1730 M Street, N. W., Washington, D. C. 20036. Financed by the National Science Foundation and administered by the Smithsonian Institution, SIE is equipped to respond to requests for information concerning ongoing research in a continuously growing number of fields. Initiated in 1949 as a cooperative effort among several government agencies to exchange information concerning research in the medical sciences, it has subsequently expanded into the biological sciences, the physical sciences, and recently into the social sciences. Currently it is moving to improve its informational capabilities in the general field of urban affairs. Meanwhile, extensive capability already exists in some fields of special interest in a regional context, such as water resources.

Notices of research projects come to SIE from a variety of sources, including government agencies, cooperating foundations and Universities, other research groups of various kinds, and interested individuals. Its power to request information is limited to the United States. However, information concerning research elsewhere can be put into the system if it is called to the attention of SIE. The system is characterized by multiple indexing in all relevant major categories and subdivisions, and either computer-aided or visible file retrieval can be used, depending on the nature of the inquiry. SIE does not issue publications, although it can and does cooperate with other

information centers on occasion in the preparation of special collections. (See below, Water Resources Research Catalog, a joint product of SIE and office of Water Resources Research, U. S. Department of the Interior.) "NRP's"--i.e., Notices of Research Projects which are sent out in response to inquiries are solely for the information of the person to whom they are sent, and may not be published or quoted without prior clearance with the principal investigator or agency supporting his efforts. There is no charge for the service. (SK)

Urbandoc

Development of a computer-aided storage and retrieval system for bibliographic references to published materials used by persons interested in planning and in urban renewal is the purpose of a three year project being carried out at the Graduate Center of City University of New York. Based on an earlier pilot project carried out with the aid of a Taconic Foundation grant, in cooperation with the Institute of Public Administration, the New York City Chapter of the American Institute of Planners, the New York City Department of City Planning, and International Business Machines Corporation, the project is currently under the sponsorship of the federal Urban Renewal Administration and the New York City Planning Commission. Heading the project is Mrs. Vivian Sessions, formerly librarian of the City Planning Branch of the New York City Municipal Reference Library, while assisting in its general development is an eleven man National Advisory Council chaired by Lawrence M. Orton, of the NYC Planning Commission. A fundamental hypothesis of the project is, of course, as Mrs. Sessions pointed out in a recent communication to the Digest, that techniques for storing and retrieving the conceptual contents of publications can be so refined and so applied that the resulting computer-aided system maximizes the utility of a literature which is multi-faceted, inter-disciplinary, and rarely neatly hierarchical. Plans call for the analysis of several thousand documents which are representative of the field, and testing the retrieval value of the analysis by actual cross-sectional queries. An interim report is to be issued in early 1967, and a final report on completion of the project in 1968. Sample computer-based bibliographies and indexes are expected to be available by mid-1966. Further information can be obtained from Mrs. Sessions at the City University of New York, 33 West 42nd Street, New York, New York 10036. (SK)

Metropolitan Information Service, New York City

A Metropolitan Information Service for the collection and distribution of information on organizational and research activities pertaining to New York City has been established by the New School for Social Research. The new unit is part of the School's Center for New York City Affairs, which in turn was established in February, 1965 as a teaching, research and discussion center devoted to the study and development of New York City. Address of the Center is 70 Fifth Avenue, New York, New York 10011. Functions to be performed by the Information Service include maintenance of a central register of all city-wide

agencies and groups involved in New York City affairs, together with descriptive material; publication of a monthly calendar covering civic events, public hearings, conferences and other meetings devoted to local problems and issues, a bibliography of new books and other materials applicable to city affairs, and ongoing research activities and action programs initiated in the city. An up-to-date library of research studies and other kinds of published materials relating to the city is also contemplated. (SK)

Information Resources in the Social Sciences

A Directory of Information Resources in the United States: Social Sciences. National Referral Center for Science and Technology, October, 1965, 218 pp. Available from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402. \$1.50 per copy.

A companion volume to A Directory of Information Resources in the United States: Physical Sciences, Biological Sciences, Engineering, published January, 1965.

Describes facilities of universities, libraries, institutes, and other organizations which are sources of information for specific subjects within the social sciences. Covers an extensive number of diverse topics, many of which are relevant to urban and regional research. Materials are indexed by subject and organization.

Highway Research

Highway Research in Progress. Highway Research Information Service, Highway Research Board, 2101 Constitution Avenue, Washington, D. C. 20418. 574 pp. Limited distribution. For information contact HRIS.

First experimental output from Highway Research Board's unique automated Highway Research Information Service. (See Research Digest, 12:1, p. 115.) Contains descriptions of more than 3,000 highway research projects gathered by the Board over the past two years. Entries appear in one or more of 34 different subject areas. There are also four indexes--a Term Index, and Secondary Subject Area Index, as well as an agency and a person index.

Water Resources

Water Resources Research Catalog. Published by Office of Water Resources Research, U. S. Department of the Interior, February, 1965. Available from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402. \$2.50 per copy.

Summaries of 1,545 water resource research projects. Entries arranged alphabetically within the following categories: nature of

water, water cycle, water and land management, development and control, qualitative aspects, reuse and separation, economic and institutional aspects, and engineering works. Materials indexed by corporate author, subject, supporting agency, and principal investigator.

Air Pollution

Air Pollution Publications, A Selected Bibliography, 1955-63.

Anna-Grossman Cooper. Published by U. S. Department of Health, Education, and Welfare, Public Health Service, Division of Air Pollution. Available from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402. \$1.00 per copy.

A selected, annotated bibliography of more than 1,000 entries concerning air pollution literature published between 1955-1963. Entries indexed according to author, title, and subject matter.

Planning Theory

An Introductory Bibliography in Planning Theory. Herman G. Berkman. Council of Planning Librarians, P. O. Box 5211, Eugene, Oregon, 97403. Exchange Bibliography No. 31, March, 1965. \$1.25.

Explores the nature and role of models in planning. Specifically covers models useful in determining spatial patterning; models and techniques useful in decision making; nonspatial models; and urban growth models.

Community Renewal

Community Renewal Programs: A Bibliography. Jerome L. Kaufman. Council of Planning Librarians, P. O. Box 5211, Eugene, Oregon 97403. Exchange Bibliography No. 32, May, 1965.

A selected list of literature pertaining to community renewal programs. In addition to general works on the subject, contains references to specific technical and summary reports from individual communities.

Open Space Planning

Open Space Planning. A Selected Bibliography. Michael A. Carroll, Bureau of Community Planning, University of Illinois, Urbana, Illinois. September, 1965. 59 pp.

Although a small number of English and Canadian references are cited, materials are limited generally to sources in the United States. A majority of the references are annotated. Materials are organized according to sequential phases of the general "planning process," including

(1) Concepts, Approaches, and Philosophies; (2) Open Space Inventory and Analysis; (3) Case Studies; and (4) Implementation.

Two appendices are included, one listing other bibliographies compiled in this field, the other citing references to planning in the Chicago Metropolitan Area.

Urban Development

Comparative Urban Development: An Annotated Bibliography.

William Bicker and others. American Society for Public Administration, Washington, 1965.

Undertaken to assist social scientists outside the United States who have an interest in the emerging field of urban development. Designed to identify relevant literature on comparative urban development. Contains over 600 items.

Housing and Construction

Basic Texts and Reference Books on Housing and Construction.

2nd edition. National Housing Center Library, Bibliography Series No. 7. September, 1965. National Association of Home Builders, 1625 L Street, N. W., Washington, D. C. 42 pp.

A selected, annotated bibliography of basic texts and reference books on housing and construction. Three hundred and thirty-one references covering forty-two topics.

International Housing

International Housing. Prepared by National Housing Center Library for International Housing Committee, National Association of Home Builders, Washington, D. C. July, 1965. 31 pp. \$5.00.

Partially annotated. Principally for businessmen. Subjects covered range from the technology and architecture of housing, to demography, social conscience and attitudes, economics, law, and politics. Although the 278 references are not oriented towards non-profit housing, some information is included on this subject as well.

Urban Real Estate Research Inventory

Urban Real Estate Research--1963. Jerome P. Pickard and Gene C. Twerwaser. Urban Land Institute, 1200 18th Street, N. W., Washington, D. C. 20036. 1968. 96 pp. \$4.00.

The largest issue of this annual collection to date. It contains 526 carefully annotated references to published items, as well as 290 non-annotated entries concerning research projects in process, or completed

but unpublished works. Topics covered include: community analysis, economic base, highways, housing, industry, land planning and use, regional development, redevelopment and renewal, taxation, and markets.

Southern Appalachian Area Research Inventory

An Inventory of Social and Economic Research Concerning the Southern Appalachians. Julian D. Mosley, Research Director, Council of the Southern Mountains, Inc., with support from the Ford Foundation. Publication of first issue expected January, 1966. For more information write Julian D. Mosley, Research Director, Council of the Southern Mountains, Inc., College Box 2307, Berea, Kentucky.

Publication of this annotated bibliography is the first step of a more extensive project. The bibliography covers action-oriented research in the social sciences dealing with people, problems, and development in the Southern Appalachian area, including both completed research and research in process. The plan is to develop a comprehensive and constantly current center of information on research results, agencies, personnel, and sources of available material. The second step is to develop a "coverage" and "interrelatedness plan and cross-index" from which it will be possible to ascertain which geographic and subject areas are being researched adequately and which are not. This knowledge is necessary for the third step, helping to initiate research in areas where little is being done.

Southern Appalachian Area Statistics

Statistical Handbook for Counties in the Southern Appalachian Area. James S. Brown, Departments of Sociology and Rural Sociology, University of Kentucky, in collaboration with Julian D. Mosley, Research Director, Council of the Southern Mountains, Inc., with support from the Ford Foundation. Expected publication date, Spring, 1966. For more information, write Julian D. Mosley, Research Director, Council of the Southern Mountains, Inc., College Box 2307, Berea, Kentucky.

Statistical data presented by counties and state economic areas for 310 counties in or adjacent to the Southern Appalachian areas of Alabama, Georgia, Kentucky, Maryland, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Subject areas on which data are given include: (1) population distribution, characteristics, and growth; (2) education; (3) health and welfare; (4) housing; (5) religion; (6) voting patterns; (7) economics. State and U. S. data included for comparative purposes. A major focus is on recent trends related to social and economic problems and development in this area.

British Research

Planning Research. The Town Planning Institute of London, 26 Portland Place, London, W. I. Compiled with the assistance of the

Royal Institution of Chartered Surveyors and the Institute of Landscape Architects. July, 1965. 256 pp. £2 2s 0d net.

New and enlarged second edition. Records work initiated or completed between 1948-1963 in urban and rural planning and its related fields. Subjects covered include: land and land resources, planning and development, landscape architecture, demography, geography, geology, distribution and location of industry, residential areas, sociology, public utilities, transport and communications, roads and road transport, public services and needs, public and environmental health, new and expanded towns, national parks, estate management, building costs and quantity surveying, rural estate management, and land surveying. Materials indexed by subjects, research workers, and contributing bodies. A Director of Research Institutions is also included.

This second edition contains twice as many entries as the first one, and extends the time period covered by five years. A special feature of this edition is a series of trend reports reviewing research on particular subjects since the war.

International Directory of Forecasters

The Long Term Forecaster's International Directory. To be published in 1966, by Dynamar (Compagnie Internationale de Dynamique des Marches). For additional information, contact A. Katchourine, Director, Dynamar, Siege Social, Gazainville (Seine-et-Oise), France.

A directory of the principal socio-economic research organizations throughout the world engaged in long term forecasting and planning. Gives detailed information about each organization's structure, background, aims, work completed or in progress.

CONFERENCES

World Congress of Housing and Planning

The 28th World Congress of Housing and Planning, sponsored by the International Federation for Housing and Planning, will convene May 2, 1966, in Tokyo, Japan. The dual themes of the Congress are "Housing Standards for Low and Lowest Income Groups" and "Urban Transportation and Urban Patterns." There will be a 19 day Basic Program, a 28 day Basic Program and Orientation Extension, and a 46 day Basic Program and "Around the World" Program. IFHP standing committees (Urban Renewal, Transportation, Historic Preservation, and others) will also meet.

International Conference of Social Work

The Thirteenth International Conference of Social Work will be held September 4-10, 1966, in Washington, D. C. The theme will be "Urban Development--Implications for Social Welfare." Plenary sessions,

general meetings, and study groups will focus on the following topics: The Impact of Urbanization; Social Policy and Strategy for Urban Development; Patterns of Intervention--Structures and Processes for Urban Development; Maximizing the Participation of Citizens in Urban Development; Inter-relatedness of Urban and Rural Development; and Social Aspects of Urban Renewal and Redevelopment. The United States report to the conference is being prepared by a 12 member committee headed by Lawrence K. Northwood. Further information may be obtained from him at the School of Social Work, University of Washington, Seattle, Washington.

NEW PERIODICAL

Urban Affairs Quarterly

Latest of the growing list of periodicals available to persons interested in urban and regional research is Urban Affairs Quarterly, sponsored by the City University of New York and appearing under the imprint of Sage Publications, Inc. Subscriptions (individual, \$8.00; institutional, \$12.00; and foreign, \$14.00) may be addressed to the publisher at 150 Fifth Avenue, New York, New York 10011. Presentation of the results of original and definitive research, together with a stress on cross-disciplinary approaches are among the principal objectives of the magazine. Regular features will include book reviews; bibliographic citations of recently published books and articles in the field of urban affairs; news and notices from Urban Affairs Centers in the United States and abroad; reports of governmental activities; and a quarterly calendar of conferences, colloquia, and other events of interest to specialists in the field. Editor is Marilyn Gittell, Associate Professor of Political Science at Queens College.

AVAILABLE BACK ISSUES OF RESEARCH DIGEST

A few copies of the back issues below are still available. Issues through Vol. 10, No. 1 may be purchased at \$1.00 per copy. Beginning with Vol. 10, No. 2 the price is \$2.00 to individuals and \$3.00 to organizations.

Vol. 8	No. 2	November, 1961
Vol. 9	No. 1	April, 1962
Vol. 10	No. 1	April, 1963
Vol. 11	No. 1	April, 1964

A few copies of the Indexes to Volume 9, Volume 10, and Volume 11 are also available at \$1.00 each.

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